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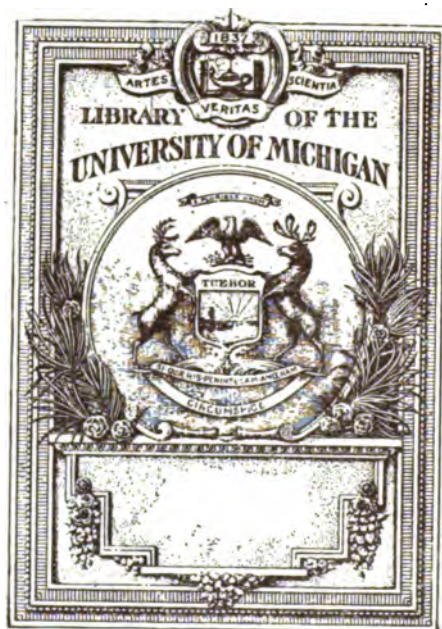
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THE BRITISH
GYNÆCOLOGICAL JOURNAL.

VOL. VIII.



THE BRITISH
GYNÆCOLOGICAL
JOURNAL:

BEING THE JOURNAL OF

THE BRITISH GYNÆCOLOGICAL SOCIETY.

VOL. VIII.

EDITED BY

Bedford FENWICK, M.D.



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THE BRITISH GYNÆCOLOGICAL JOURNAL.

VOL. VIII.—No. 29.

MAY, 1892.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JANUARY 14, 1892.

W. CHAPMAN GRIGG, M.D., PRESIDENT, IN THE CHAIR.

PRESENT: 18 Fellows, 2 Visitors.

The business of the Annual Meeting, held in conformity with the provisions of the Companies Act, 1867, was duly carried out, the Officers and Council for the coming year being balloted for and elected. The Treasurer's Report was read, received and adopted. A vote of thanks to the retiring President and officers was proposed by Dr. Robert Barnes, seconded by Dr. Bedford Fenwick, and carried by acclamation, and was briefly acknowledged by the President and Dr. Fancourt Barnes. It was resolved that under the circumstances (the death, that day, of H.R.H. the Duke of Clarence and Avondale) the address of the President should be taken as read. Dr. Robert Barnes proposed, Dr. Routh seconded, and it was unanimously resolved:

"That the British Gynæcological Society at its meeting held this day, respectfully offers the expression of its heartfelt sympathy with the Queen, the Prince and Princess of Wales, and the Royal Family in the great affliction which

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has struck them and the nation at large, by the premature death of the Duke of Clarence and Avondale."

The rest of the business was then postponed, and the Society adjourned.

Valedictory Address by the retiring President,
W. CHAPMAN GRIGG, M.D.

GENTLEMEN,—As one of those who took an active part in the foundation of this flourishing society, now eight years ago—a fact of which I am justly proud—it may not be out of place if I recall one or two of the leading and more salient principles which actuated those of us who decided upon this course. At that time, it was strongly felt by several of the most distinguished and able pioneers of gynæcology that a sister society, though performing excellent work, did not meet all the new and altered requirements of gynæcological practice. The constitution of that society had within it certain germs of weakness which were doubtless not recognised when that constitution was determined upon. When this sister society was founded, in 1856, there was still a strong feeling of opposition against those who devoted themselves more especially to the study of the diseases of women, and even of obstetrics. Some of the leading members of our profession (the late Sir Benjamin Brodie, for example) did not hesitate to declare their belief that the practice of midwifery was unworthy of the attention of scientifically trained medical men—fit only to be undertaken by midwives, who, at that date, received no instruction whatever. Under these circumstances the number of men of sufficient eminence who could be selected to fill the post of President was necessarily limited, and it was evidently not judged prudent to provide for the election of a fresh president each year. For this reason, the office was made bi-annual, and, doubtless, in order to give greater stability to the Council, every retiring president was made *ex-officio* a life member of that body. Though justifiable on account of the circumstances attending the formation of

the Society, this form of constitution produced results which could not well have been foreseen, arising from the innate conservatism of our profession. The effect of this could not but favour the formation of cliques, and give an exaggerated influence to a small number of persons, a condition of things which many of its members thought interfered with the development of the study of the diseases of women; and which certainly gave rise to feelings of dissatisfaction. When, therefore, it was decided to start a cognate society, warned by this past experience, the founders of the British Gynæcological Society provided that the post of president should be annual, and that on relinquishing office the retiring president should only be eligible for election as an ordinary member of Council, rising by degrees to the dignity of vice-president. These innovations constituted a decided departure from the rules, not only of the parent society but of those of nearly all the other medical societies of London.

When the post of president was made annual our first president, Dr. A. Meadows, who, as you all know, was one of the chief promoters of the new society, gave a parting or valedictory address at the termination of his period of office. As first president of a society of which he not unnaturally felt proud to have been a founder, he may be excused for so doing, although it was felt at the time that the example was one which might be more honoured in the breach than in the observance. Unfortunately, the precedent thus created has become the rule, and the consequence is that we have in one and the same number of our JOURNAL a large amount of space taken up with two addresses. Another consequence is that the two first meetings of each session are devoted almost entirely to the addresses of your presidents. I feel sure that the consensus of opinion at the time when the late Dr. Meadows created the precedent, that it was a mistake, will since have been ratified and confirmed by the general body of Fellows. I venture therefore to express the hope that I may be the last president who will feel called upon to continue a practice which has little to recommend it. If I myself

have not cultivated the abstinence which I now advise, it has been partly in deference to the request of your Secretaries, and partly because I felt that it would be but courteous to take the opinion of your Council on the matter, instead of appearing to act on my own responsibility. I regret that great pressure of private business at a time when I was far from well prevented my summoning your Council in time to consider and decide the question, but I venture to hope that it will be settled on the lines which I have indicated.

To return, however, to the principles upon which this Society was founded. I should like to call your attention to another fact—that one object which its founders had in view was to endeavour to resist the tendency which manifests itself in all the large medical societies which meet in London, to become too exclusively metropolitan. With this object in view, it was laid down in our laws that meetings should from time to time be held in the sister kingdoms, Ireland and Scotland, and also in the provinces. The better to embody this fundamental principle, the title of our Society was prefixed with the designation “British,” in order to emphasize the fact that we were founding no merely metropolitan society, but a society for Great Britain and Ireland, its Colonies and dependencies. Still further to realise this idea, it was decided that every third president should be a member of the Society, who was non-resident in the metropolis.

I think I may claim that the effect of these rules has been altogether salutary in respect of the development and management of the Society. It has brought us in touch with members of the profession who practise all over the kingdom, and we are largely indebted to them for the success of our meetings, and the satisfactory situation of our affairs. We have succeeded in infusing into our transactions a cosmopolitanism which other societies may envy, but cannot under existing rules hope to emulate. I need hardly remind you that some of the most valuable contributions to our JOURNAL have emanated from eminent surgeons and practitioners outside the sphere of metropolitan influence, and from our Colonies ;

contributions which we hail with great pleasure; and it cannot be questioned that we have thereby secured an accession of originality and talent.

Circumstances into the consideration of which I need not here enter, have, or rather had, prevented the Society fulfilling one of its objects, namely, the holding of periodical extra-metropolitan meetings. The year which has just come to an end, however, has witnessed the carrying out of this most desirable object, thanks to the energy, unremitting labour, and personal influence of Dr. Benington, of Newcastle, whose tact and management were successful in removing the many and great obstacles which stood in the way of its realisation; thanks also to the liberality and public spirit of the University of Durham, and the Professors and Governors of the Newcastle College of Medicine, at which city, in June last, we held our first country meeting. The Society owes a deep debt of gratitude to these bodies, and to Dr. Benington, for the great success of the undertaking, and at the first meeting in London after the Congress a hearty vote of thanks was very properly accorded to them. The value of the papers read at this Congress, the earnestness and richness of the debates, and the gratifying number of specialists and practitioners who attended the meetings, were admitted on all hands. I hope that your Society will be encouraged by the *éclat* of this, the first provincial gathering, to repeat the experiment. As a means of exciting the attention and interest of the general practitioner in the work which our Society has set itself to accomplish, a congress of this kind cannot well be surpassed.

If I insist upon this point it is because I feel very strongly that if gynæcology is to accomplish all the good of which it is capable, the progress which is being effected must be brought home to the general practitioner, upon whom in the majority of instances falls the burden of the preliminary diagnosis, without which the resources of our art must to a large extent prove unavailing. We may fairly flatter ourselves that we have taken no mean part in breaking down many of the barriers which conservatism in science had raised to

hinder the free evolution of our branch of medicine. Others are still in the course of demolition in virtue of that true spirit of science which permits no delimitation to its study, and will insist upon perfect freedom of thought and action within its domain.

Gynæcology, which not long since was practically *terra incognita* to the general practitioner, is fast becoming part and parcel of his education, and in proportion as this special knowledge becomes generalised, we find that the old ideas as to the frequency of this or that abnormality or disease, requires to be modified. Nowhere has this reconstitution of statistics been more necessary than in respect of the peculiar freak of nature, ectopic gestation. Formerly looked upon as one of the curiosities of pathology, cases are now frequently reported of successful operation. Nowhere too, has the advantage of early diagnosis been more apparent for we have, in ectopic gestation, to deal with a condition which, in a very large proportion of cases, is almost inevitably fatal if left alone, but which, even under unfavourable circumstances, often admits of speedy and permanent relief at the hands of the skilled surgeon. As to its etiology we have still much to learn, although an eminent Fellow of our Society has the honor of having propounded the most consistent and probable theory yet enunciated on the subject. Ingenious as this hypothesis undoubtedly is, its premisses are not confirmed in all the cases that come under our observation, and until a theory harmonises with all the facts it seeks to explain, it cannot be considered to be placed on an impregnable basis. The broad general lines of treatment are now generally agreed upon, but the choice of particular operations and the decision as to the period at which recourse should be had to any particular method, must still be left to the discretion of individual surgeons. No arbitrary rules can be formulated for their guidance and each case must be decided upon its merits.

Now that we have placed operations upon the pelvic organs on a sound basis; now that adepts have no longer to

fear professional obloquy and public censure, we can well afford to allow our results to speak for themselves. Nothing succeeds like success, and this being so, we may be content to await the course of events, acting according to our lights and trusting to the crushing effect of statistics to further our cause. We have made many converts to our views and practice, but converts are invariably enthusiasts and we have possibly more to fear from our friends, when indiscreet, than from our adversaries. There is work enough to absorb all superfluous energy in filling up the lapsus in the knowledge so painfully and laboriously acquired. We have our own little burning questions to settle, and these, experience and careful experience, can alone be relied upon to answer.

One of the points to which I have called attention, but which is far from having been worked out, is the intimate connexion which exists between gynæcology and obstetrics. As one who has had more to do with the latter department I am convinced that many of the complications met with after child birth are directly or indirectly due to pre-existing inflammatory or other affections of the reproductive organs, of which at least two cases have come under my notice during the past year. Upon the importance of this connexion it is hardly necessary to insist. Obstetricians are often grieved and disappointed to find that in spite of every antiseptic and other precaution puerperal septicæmia thwarts their efforts and carries off their patients. In consequence of their inability to assign a cause for this complication they have shown a tendency to attribute many of the more obscure cases to auto-infection, a doubtful theory because it does not go to the root of the matter and because it tends to reconcile one to the occurrence as being inevitable. I would therefore urge that special attention should be paid to the history of past disease of the pelvic organs in pregnant women. Not only will the information assist us in understanding the real nature of the case but it may, by suggesting the necessity for certain special precautions, save lying-in women from an untimely end and, should mischief arise, the knowledge thus

obtained may enable us to afford immediate relief, instead of leaving the case to nature alone to decide whether, after a prolonged and dreary illness, the patient is to recover or to succumb.

While on the subject of lying-in women I cannot well escape a reference to the unsuccess which has attended the efforts to bring about an improvement in the status and training of monthly nurses. It cannot be to the interest of our science that ill-educated and half-trained women should be entrusted with the responsible duty of nursing parturient women, and I sincerely hope that one day our Society may see that it is no infraction of the spirit of its laws or of its dignity as a scientific society to assist in protecting the indiscriminating public from such nurses. I am afraid we failed partly from being too ambitious. Rome, however, was not built in a day, and we may, I think, wish the promoters of this ill-fated attempt at legislation better success on some future occasion. Again, the question of bringing midwives under some control for the purpose of ensuring an efficient education has met with an opposition that I feel sure many of those who took part in it must, by this time, admit was irrational. The motive upon which they based their opposition must have impressed many with the conviction that it was not directed in the true interests of medical science which, if it means anything, means the alleviation and prevention of human suffering, but from a far lower standpoint, in fact, from the point of view of mere pounds, shillings, and pence. Without being a prophet it is easy to forecast that in the long run the common sense and common humanity of the community will overcome merely interested opposition. The fact remains that a very large proportion of poor women are left in their hour of need to the tender mercies of ignorant women whom, however, one must not wantonly condemn, for they can with truth and justice maintain that if it were the unanimous opinion of our profession that a medical training was essential to their calling, the profession would make its voice felt in the Legislature and bring about the enforcement

of the proper training of midwives. Until then their unhappy mistakes will continue to fill the columns of the lay press and contribute to swell the death-rate from strictly avoidable causes during the puerperal period. I do not, therefore, despair of reform in this respect, though it may be necessary to direct our energy in a somewhat different channel. To those gentlemen who have elected to place narrow professional interests before those of the suffering poor and to sacrifice the higher interests of the profession to vested rights, I have nothing to say, except that I trust they may, one day, awaken to a more generous conception of the responsibilities incumbent upon them in virtue of their calling and their intelligence.

The time is, I believe, ripe for a determined agitation in favour of the registration of still births. We are here on more solid ground, for no one who has given the matter a moment's thought will be disposed to question my assertion that our present absurd and indefensible system paves the way for the commission of an amount of crime which few, except those intimately acquainted with the practice of midwives in poor localities, can have any conception. It stultifies in great measure the laws for the prevention of infanticide and premature delivery. There is reason to believe that the government is rather favourable than otherwise to this small, but important, reform, though in view of the exigencies of the political situation it would perhaps be too much to hope that the subject will receive immediate attention. I would therefore venture to suggest that it might not be inopportune if your Society took steps to bring to the notice of the authorities a formal expression of opinion as to the necessity and the urgency of an extension of the existing law so as to provide for the registration of still births, including at any rate all births within the viable period.

I have been struck by the fact that among the numerous papers read before your Society there has been no mention of the action of drugs in the treatment of diseases peculiar to women. We have had operative procedures in abundance, but it seems to me that we have lost sight of the requirements

of general practice and the teachings of every-day experience. Yet the value of drugs and remedial measures in alleviating the sufferings of women who are the victims of diseases peculiar to their sex, is a matter of common observation, and I am of opinion that the subject merits and should receive, a somewhat more generous share of our attention. I cannot help thinking, for example, that much might be done by suitable medication and other means, to alleviate that condition of pain associated with mischief in the region of the uterine appendages which is generally present in women of a neurotic temperament. I feel sure that the neurotic diathesis is a very important factor in the production of much of this suffering, a belief which is justified by the observation that pathological conditions of the pelvic organs entailing gross lesions and great displacement of parts, are often present without any subjective symptoms. It is evident therefore, that there is something outside and beyond these lesions to account for the element of pain. The tendency of the present day seems to be exclusively operative, but this is probably only a wave in the tide of fashion which obtains in medicine as in other walks of life, and the time cannot be far distant when a reaction will make itself felt. Personally I rarely operate, and I cannot refrain from testifying to the extraordinary influence which certain drugs and accessory methods of treatment possess when brought to bear upon affections peculiar to the female sex. I have noticed with regret a tendency in our debates to call into question the honesty of men who have removed the ovaries or the tubes for the relief of suffering. Fellows seem too apt to draw their conclusions from an examination of organs removed, without paying sufficient attention to the clinical aspects of the case. I venture to submit that such a course is neither fair nor logical. In criticising the treatment adopted one ought always to give the operator credit for having acted conscientiously and to the best of his judgment; and it is absolutely essential not to lose sight of the clinical features as well as the pathological appearances. The essence of a liberal education is to teach the young never to impute motives; let

us carry our schoolboy teaching to our every-day life of medicine.

There is one point in connection with the Newcastle Congress to which I have omitted to refer. As your President I feel proud that our first provincial meeting should have taken place during my year of office, although I did not preside over its deliberations, having voluntarily resigned that honour in favour of our honorary President, Dr. Robert Barnes, who I learned, was about to relinquish practice. I felt that in so doing I was sure of the approbation of the Fellows of the Society of which he might well say *pars magna fui*. Dr. Barnes gracefully accepted the post in a letter that I shall always treasure, and in which he cordially thanked me for having afforded him an opportunity of presiding at a gathering which he regarded as probably his last appearance in public. I feel I have your authority to offer him our best wishes on his retirement from active work in a profession which, as teacher, as author, as obstetrician and as disputant, he has done so much to advance and adorn. May he be spared many years of health and strength to enjoy the repose he has so well deserved.

I need hardly remind you that the office of president of a Society like this, is as many of you are aware, by no means one of unmixed enjoyment. Nothing conduces so much to good work and effective debate as a firm hand and a steady purpose in the presidential chair. To repress irrelevancies, to stimulate discussion, and to provide for the amenities of debate, constitute a task which is oftentimes difficult enough to carry through satisfactorily. I must plead guilty of falling far short of the high ideal I have formed of such a post. I ask no better reward than to feel that my efforts have not been altogether in vain. No small share of the harmony which has characterised most of our meetings has been due to your excellent Secretaries, upon whom, with your Treasurer, falls the burden and heat of the day in carrying on the affairs of a large and flourishing society like ours. The session has not been free from discussions touching upon points respecting

which opinions are divided, and as to which some entertain very decided views. If, however, in the heat of debate, criticisms have at times been more pointed than was absolutely necessary to the elucidation of the truth, I trust that their warmth has been charitably attributed to an abstract love of truth—a jealous and at times a somewhat unruly passion which has never shown any great regard for the feelings of its supposed erring and benighted adversaries. I may observe *en passant* that there is nothing to be gained by a too faithful rendering of the *rôle* of the “candid friend.” It should always be our object to level our observations and criticisms at principles or conclusions rather than at persons. It is of vastly greater importance to demolish an erroneous deduction or an illogical conclusion than, with rhetorical weapons, to vanquish an individual adversary.

Before concluding there is one other point to which I desire to call your attention. The change of the day for meeting from Wednesday to Thursday seems to have had a prejudicial effect on the attendance of Fellows, probably because Thursday is a less convenient day. Some of our most distinguished Fellows have been prevented from attending on that account, and it will be for the Fellows to decide whether they prefer a large room with a small attendance, to a small room with a large attendance.

If I have not alluded in my address to particular papers it is because, in looking over the proceedings for the past year, I felt that it would be invidious to select some to the exclusion of others, and the time at my disposal this evening would manifestly not have allowed of an adequate analysis of even the more important of them. I cannot, however, forbear a mention of the admirable contribution of Dr. Leon, of the Netherlands, in addition to the contributions of our Colonial *confrères*, to which I have already alluded.

Gentlemen, I beg to thank you all for the kind help and assistance which I have always received from you in the discharge of my duties as your President. That invaluable aid has materially lightened the burden of office, and although I

feel how imperfectly I have performed the onerous duties which that office imposed upon me, I rely upon your indulgence for any shortcomings which may have made themselves felt.

I feel proud to hand over the chair to such a distinguished member of our profession as Professor Simpson, of Edinburgh, who will add lustre to our Society, and I trust that during his tenure of office our proceedings will do justice to his eminence in our department of medicine.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JANUARY 28, 1892.

A. W. EDIS, M.D., F.R.C.P., TREASURER, IN THE CHAIR.

PRESENT: 15 Fellows, 3 Visitors.

The following were proposed for election: W. J. Davies, M.D., Johannesburg; A. M. Gledden, M.D., Australia.

The following were elected Fellows of the Society: E. B. Echlin, B.A., M.D., C.M., Canada; H. M. Brown, M.D., Ohio.

Dr. BANTOCK exhibited the following specimens:

1. Two examples of papilloma of the uterine appendages.

The patient was a lady aged forty-two, who had resided for many years in India where she suffered from several diseased conditions due to the climate, especially from chronic diarrhœa, and supposed hepatitis. On her return to this country her attacks of diarrhœa frequently recurred, often attended with considerable elevation of temperature. But it was only a few weeks before she came under his observation in the beginning of September, in consultation with Dr. Alex. Bowie, that signs of ascites made their appearance. She was then in a state of extreme emaciation, the abdomen was so distended that the skin glistened, the diarrhœa was very troublesome, sickness was frequent, and she had incontinence of urine from the intra-peritoneal pressure. There was universal fluctuation in the abdomen, with a clear percussion note in the superior parts. *Per vaginam* there was nothing to be made out except a sense of resistance in the region of the right ovary. There was no albumen and the urine was abundant. There was marked œdema of the right leg and thigh, but in the left it was confined to the foot and lower part of the

leg. He advised abdominal section and the patient at once assented, and as there was no time for delay this was done on September 14th, with the assistance of Dr. Bowie. After the evacuation of a very large quantity of fluid through an incision about two inches long, a papillomatous mass made its appearance, on the right side and was carefully brought out, and he was fortunate enough to obtain a very fair pedicle, apparently quite free from disease at the line of ligature. On the left side there was a smaller mass of the same kind with a very good pedicle. There was a small quantity of fibrinous matter between the coils of intestine in juxtaposition to the right mass, but otherwise the peritoneum in the pelvis and throughout was apparently quite healthy. The liver was large and its edge more rounded than in the normal condition. The peritoneal cavity was well flushed with warm water and the wound closed. Marked improvement at once followed the operation and in about three weeks she was able to leave her room. But the diarrhoea was difficult to control and at the end of a few weeks more proved too much for her. At no time was there any sign of any recurrence of the ascites. Had the patient survived for any length of time it would have been interesting to watch the case for any recurrence. He was of opinion that there was a good prospect of a permanent good result in this respect, for it was generally admitted that this was the form of malignant disease that was most amenable to surgical treatment.

Dr. EDIS endorsed Dr. Bantock's statement that an exploratory incision was far safer and more satisfactory than tapping the abdomen in cases of ascites. By the former operation we were not only relieving the patient of the accumulated fluid, but were also in a position to determine what was the exciting cause of the disorder, and therefore to deal with it on ordinary surgical principles.

Dr. BARNES expressed his opinion that there were two kinds of papilloma. He thought the days of abdominal tapping were passed. Tapping rather hastened than retarded the fatal issue, whilst abdominal section not only opened

the way to accurate diagnosis that might lead to absolute cure, but in other cases gave sensible if not complete relief. Some years ago he was summoned into the country to perform an ovariectomy. He diagnosed ascites and opened the abdomen; a large quantity of fluid escaped; the peritoneum was covered with papillomatous excrescences. The patient made an excellent recovery, resuming her domestic duties. He had had a similar case at St. George's Hospital. The patient came to report herself two years afterwards. She was quite well. He proposed that the specimen should be referred to the Pathological Committee for investigation and report.

Dr. INGLIS PARSONS found that these tumours often recurred and were more often than not, malignant. They were sometimes difficult to diagnose from ovarian tumours on account of the tenseness of the peritoneum.

Mr. F. BOWREMAN JESSETT quite agreed with the observation made by Dr. Barnes as to the two forms of papillomatous growth found in the peritoneal cavity, the malignant and benign. He would like to ask Dr. Bantock if he examined further into the peritoneum than the ovaries. He had seen a number of cases which had been tapped time after time, in which the cavity refilled with remarkable rapidity. He quite agreed that in all these cases early abdominal section should be performed in preference to tapping. From examination of the specimen he was inclined to think that the papillomatous growth sprang from the peritoneum and not from the ovary or tubes.

In reply to the various observations that had been made Dr. BANTOCK pointed out that there was no question about the fluid being free in the peritoneal cavity. He was entirely at one with those who were in favour of abdominal section as opposed to tapping in cases where there was no obvious disease of the heart, kidneys or liver, and he presumed that no surgeon of any experience held a different opinion. It was well known that the presence of a malignant tumour in the abdomen was usually associated with ascites. Even in

these cases the exploratory operation was always followed by some benefit. He quoted a case of a young lady on whom he had operated, over two years ago, in which the peritoneum was universally affected with papilloma. He gave the patient three months to live, but to his surprise about a year and a half afterwards he had a letter from a friend announcing her perfect recovery. But it was also known that ascites often accompanied non-malignant solid tumours. He quoted an example of this in which he himself had tapped the patient about half a dozen times. Nothing could be made out at the first examination beyond the ascites, but after the evacuation of a large quantity (over twenty-five pints) of a very dark, suspicious looking fluid, a solid tumour was discovered in the region of the left ovary. On finding that, after the repeated tapplings, the tumour had not increased in size he opened the the abdomen, and removed a solid tumour of the left ovary with complete success. Such an experience as this could not but confirm anyone in advocating exploration to the exclusion of tapping, which was so often disastrous in its results. He could not accept the suggestion that the chronic diarrhoea was due to any affection of the peritoneum or that there was any connection between it and the papilloma. It must be remembered that the diarrhoea had existed for years, and it must be evident that the papilloma was of quite recent occurrence. He should be glad to have the specimen examined by the Pathological Committee. His own confident opinion was that it originated in the uterine appendages, and not in the peritoneum as had been suggested.

2. *An example of an ovarian tumour with a twisted pedicle*, from a lady in her 71st year, shewing, in the most marked degree, the initial changes resulting from that accident. A small swelling had been discovered, in July last, in the right lower abdomen, accompanied with difficulty in micturition. Within the month preceding his first acquaintance with the case the tumour had grown more rapidly, and as it had become painful and tender, and accompanied with an evening rise of temperature as high as 103° , and very restless

nights, Dr. Donald Baynes insisted on a consultation, and Dr. Bantock saw the patient for the first time on December 13th. She was a widow, after over forty years of married life, and gave birth to only one child at age of nineteen, two years after marriage. Menstruation had ceased at the age of fifty-two, and had always been rather excessive. On examination, there was a globular tumour presenting very prominently in the lower abdomen and reaching up to the umbilicus, exquisitely tender to the touch and apparently fixed. On the left side, just above Poupart's ligament and below the level of the tumour there was a feeling of resistance which, on bimanual examination, was found to be due to a multiple fibroid mass. The rectum was loaded with scybalæ. The diagnosis was—"probably inflamed ovarian cyst," and I advised operation. The patient would not decide at once, but another night's suffering determined her in its favour, and as soon as she could be got ready the operation was performed, viz., on December 16. On opening the peritoneum, a mass as dark as any blood clot was discovered, and apparently solid. After separating it from the parietes for two or three inches around the wound, an incision was made into it, and some thin reddish tinted fluid with some coagulum was evacuated. The collapsed cyst was now drawn out, the remaining adhesions to the parietes were broken down and many coils of small intestine were separated until the pedicle was reached. This was enormously thickened, twisted about three quarters of a turn, from right to left, and so short that it was with difficulty that he was able to get healthy tissue to transfix close to the right cornu of the uterus, the latter being obscured by the presence of a fibroid tumour involving the right posterior and upper aspect of the organ. There were several smaller fibroids on the left side, and from their looseness and mobility it was evident that at one time they had been much larger and were now undergoing atrophy. On cutting away the tumour he saw that on the outer aspect he had not got behind the congested tissues, and a fresh ligature was applied and the stump was trimmed.

The peritoneum was now well flushed, a drainage tube was inserted and brought out in the middle of the wound to allow of its reaching the bottom of Douglas's pouch, which would otherwise have been impossible, as one of the fibroids nearly filled the pelvis. The patient made a very good recovery and is now quite well.

Although the tumour has now been in spirit for over a month it still presents the characteristic appearance in a very marked manner. It was the most intensely congested example he had ever seen, yet the history of the case did not lead him to expect to find a twisted pedicle. There was no sudden onset of pain, nor sickness as is so often observed in these cases. In a typical case the sequence of events was somewhat as follows. As soon as the twisting reached a certain point, which depended on the length of the pedicle (for while in some, as in the present case, that point was attained by less than a full turn, in others as much as two complete turns failed to effect the same result), the venous circulation was arrested while the arteries remained open. Then congestion occurred, but the severe symptoms did not set in until hæmorrhage had taken place into the cyst. Then tension was set up, and as a consequence pain and tenderness, vomiting, symptoms of peritonitis (local), with acceleration of the pulse and rise of temperature. The tumour now became a foreign body, and under the local irritation adhesions were contracted with neighbouring tissues. That the process was not a true inflammation of the cyst was evident from the fact that, as far as he was aware, the products of inflammation were not found in these cases; and that it did not occur immediately, a case of his own, reported to the Society in May last, went to show. In that case the symptoms had existed for several days in an acute degree, yet at the time of operation no adhesions had formed. It was usual for these acute symptoms to subside, and the next stage was a diminution in the size of the tumour. So characteristic was this that he had frequently diagnosed the condition from the history of the case. There was no doubt that in many cases the interruption of the

circulation through the pedicle was so complete that but for the occurrence of adhesions, and the consequent partial nutrition of the tumour, the whole mass would have sloughed off if the patient could live under such circumstances. He had seen several cases where the pedicle was so exsanguined that it appeared as if the pedicle might have been divided with perfect safety without the previous application of a ligature. The occurrence of an ovarian tumour having a connection with the omentum only was the final stage in the process. Of this he had met with two examples.

Dr. PARSONS found that the sudden onset of pain and hæmorrhage in these cases sometimes led to a diagnosis of extra-uterine gestation. But the course of the menstruation and the previous history was usually sufficient to exclude this condition.

Dr. EDIS referred to a case which had been diagnosed as ectopic gestation, in consequence of the severe constitutional disturbance arising suddenly in a patient where a well-marked tumour was detected. The fact that the swelling had become smaller and not larger since the first attack suggested that it was more likely to prove a case of strangulation of an ovarian tumour from twisting of the pedicle than an ectopic gestation. This was confirmed at the time of operation. A flaccid ovarian cyst containing a quantity of blood was removed, and the patient convalesced rapidly.

Dr. BARNES described the ovarian tumour as a lever, one side was usually more solid than the other, and so formed the arm which received the moving force. In some cases this force was the growing gravid uterus, which, acting from below and to one side, gave the rotation. He had seen several such cases. In other cases the moving force might be the pressure of sexual relations, the pressure telling chiefly on the more solid side of the tumour.

Dr. BURFORD asked Dr. Bantock if he had often met with a strangulated multilocular ovarian cyst. In two cases of strangulated cyst he (Dr. Burford) had operated on within a twelvemonth both cysts were unilocular. He further

wished to draw attention to certain symptoms accompanying cyst strangulation. In both his cases the main feature was intractable alvine obstruction, with vomiting, &c., only in mild degree. In the second case, operated on within a fortnight after accession of acute symptoms, the cyst was distinctly flaccid.

Replying to the various questions raised Dr. BANTOCK said that in May last, on the occasion of his exhibiting a specimen of twisted pedicle, he took the opportunity of expressing his dissent from the explanations offered as to the cause of this accident. It was maintained that in the case of a left ovarian tumour the twisting was from left to right, while the right ovarian tumour twisted from right to left. Strangely enough, only a few weeks later his next example was a left ovarian tumour twisted from *right to left*. In the present instance, the tumour occupied an absolutely central position, and he could not see how it could be acted on either by the sigmoid flexure on the one side, or the cæcum on the other. With regard to the differential diagnosis between twisting of the pedicle and tubal gestation (ruptured) raised by Dr. Parsons, he was of opinion that in young subjects the question might arise, but it was impossible in the case under consideration, and could not for a moment be entertained.

Mr. BOWREMAN JESSETT showed three specimens. The *first*, a large myoma situated on the front of the neck of the uterus, the bladder being stretched over quite two-thirds of the anterior surface. He enucleated the growth together with the uterus, and ligatured the ovarian and uterine arteries, detaching the whole by cutting through the upper part of the vagina. The patient died from shock. The interest connected with this case was that the patient had suffered from profuse hæmorrhages for some years, and on account of the patient's age (45 years) he had deferred operation hoping the bleeding might cease, by complete rest and care. The tumour increased in size to such an extent that the patient had to have her urine drawn off, and as the hæmor-

rhage still continued, it was decided to operate. On opening the uterus a mucous polypus was found at the fundus, and it was this, no doubt, that was the cause of the hæmorrhage. Mr. Jessett pointed out that in his opinion even if the large myoma had been enucleated and removed that the hæmorrhage would have continued. He invited the opinion of the Society upon this point.

The *second specimen* was from a lady who had a large tumour presenting above the pubes and extending downwards, being firmly wedged in the pelvis. In this case the uterus and appendages were in front. The tumour was removed by enucleation with very great difficulty, an assistant being told off to push the tumour up through the vagina while traction was made from above, there being two or three small myoma in the uterus. He decided to remove the organ and proceeded to apply the *serré-nœud*, the envelope of the tumour being fastened to the incision in the parietes. The patient at the time of the report was doing well.

The *third specimen* was a large renal calculus that he had removed from the kidney of a woman. The interest of this case consisted in this being the third operation he had performed on the same kidney of this woman, having four years previously removed a calculus from it, and again another two years ago. The woman had only one kidney, as was clearly proved by the total absence of urine in the bladder after each operation. The patient was doing well.

Dr. ROUTH moved that the first case mentioned by Mr. Jessop should be referred to the Pathological Committee. It was not clear at first sight from the specimen what was vagina and what was uterus, but it was clear that the polypus at the fundus was *the* cause of the hæmorrhage, as no part of the large extra-uterine fibroid projected within the uterus, which he held was essential in order that the hæmorrhage should be produced, which was not the case here; and this he stated in spite of the fantastic and curious opinions enforced by some authors.

The meeting then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, FEBRUARY 11, 1892.

JAMES GREIG SMITH, M.B., C.M., VICE-PRESIDENT, IN THE CHAIR.

PRESENT : 23 Fellows and 3 Visitors.

A letter from Sir Dighton Probyn was read, acknowledging, and thanking the Society for, the resolution of condolence passed at the meeting on January 14th, and duly submitted to T.R.H. the Prince and Princess of Wales.

Dr. W. J. F. Davies and Dr. A. M. Gledden were elected Fellows of the Society.

The following were proposed for election : L. S. Murtry, M.D., Louisville, U.S.A. ; C. Molson, L.R.C.P., Wimbledon ; C. G. Cannaday, Ronnake, U.S.A.

The following paper was read :—

Sub-peritoneal Hysterectomy.

By HEYWOOD SMITH, M.A., M.D.Oxon.

IN giving the above title to this paper, I have not aimed at its being accurately descriptive, but have chosen it on the score of brevity for the sake of more easy reference. A more proper title would be "An intra-pelvic yet extra-peritoneal treatment of the Stump in cases of Hysterectomy."

I propose briefly to sketch the methods most commonly in use for the treatment of the cervical stump, quoting from the papers and speeches of various operators ; to quote some cases of the intra-pelvic treatment of the stump by those who have so operated ; then to narrate those cases in my own practice ; and finally, to make some observations which I hope will tend to show the intra-pelvic and extra-peritoneal method will eventually become *the* method of treatment, where practicable, in cases of fibrous tumour of the uterus.

Improvements in operations are brought about either by some "happy thought" occurring to an operator in the course of an operation, or by the gradual evolution of methods worked out, it may be, by various operators extending over a considerable space of time. We have seen this process evolved in the case of ovariectomy through the ligature and pins, then the clamp, then the actual cautery (which had such good results) and which initiated the intra-abdominal treatment of the pedicle until we have arrived at the simple ligature of silk, which has reduced the mortality to its present favourable percentage.

In dealing, however, with the stump in hysterectomy, we are brought to face a totally different condition than we have in the pedicle of an ovarian tumour, for we have to manipulate a stump composed of contractile tissue, which by its shrinkage, when constricted as a whole, relaxes the pressure on the vessels and opens up the danger of fatal hæmorrhage. To obviate this danger the majority of operators prefer to bring the stump outside the abdominal wound where it is open to observation, and can be further constricted from time to time as necessity requires.

If, however, we can carry out a method whereby the vessels can be effectually secured and at the same time do away with the disadvantages of the clamp, we shall, I venture to think, see our cases get well more rapidly, and our patients less exposed both to danger from septic absorption as well as to inconvenience from tension on the stump and the abdominal wound, and from the inevitable crowding of the bladder.

It will not be necessary before such a Society as ours to enter into details with regard to the usual method of procedure in cases of hysterectomy as practised by Bantock, Lawson Tait, and others, where the stump is secured outside the abdominal wound by a *serre-nœud*, the peritoneum in some cases being sewn over the end of the stump, but I think I shall be able to show that there has been a desire and many attempts to attain to a better practice, though hitherto the larger mortality has dissuaded many from persevering in their

endeavours to render the intra-pelvic treatment of the stump easy and safe.

In order to prevent this paper extending to an inordinate length, I will limit myself to extracts from our own excellent Journal, a paper in the *Lancet* by Mr. Milton, of Cairo, the discussion on Mr. Meredith's paper before the Medical Society, and from the *American Journal of Obstetrics*; and, as I think it would be more systematic to proceed in order of time, I will commence with a report of a case presented by Dr. Christian Fenger to the Gynæcological Society of Chicago on June 29th, 1888 (vol. iv. of this Journal, p. 399).

The case was a fibro-cystoma growing from the fundus uteri by a thick pedicle in a woman aged 35. He says: "After temporary elastic constriction around the cervix, the tumours were enucleated, and as the uterine cavity was not opened, I united the wound of the wall of the uterus with buried step sutures, deep and superficial, and a final continuous suture along the inverted borders of the peritoneum." An abscess formed in the stump, which was evacuated ten days after the operation, nevertheless the patient died in the third week after the operation. I shall have to refer to this suppuration of the stump later on.

At a meeting of the Society on Dec. 12th, 1888 (vol. iv. p. 463), Dr. Bantock exhibited a tumour he had removed from a woman at the Samaritan Hospital. Mr. Lawson Tait had opened her abdomen in 1881, but had closed it again deeming the case malignant. When Dr. Bantock operated there was albuminuria, the broad ligaments were reflected over the tumour, and the blood vessels were very large. "After the removal of the mass . . . an enormous surface was left exposed; but it rapidly contracted after the removal of the tumour . . . After tying many bleeding points . . . he stitched the anterior half of the peritoneum to the posterior, and completely obliterated the raw surface. The patient died in six days. At the *post-mortem* examination the *peritoneal cavity was found perfectly healthy*. There was no trace of the line of suture of the two layers of peritoneum, which was

absolutely healed. When he made a small incision through the peritoneum, which would represent the top of the closed sac, about an ounce of reddish clear inodorous fluid escaped, not the red turbid serum characteristic of septicæmia, but perfectly bland, non-irritating fluid, free from decomposition." The kidney disease was probably the chief factor in causing death. In this case also we see there was a tendency to suppuration of the stump, as doubtless, if she lived, the serous accumulation observed at the necropsy would have passed on into suppuration.

At the same meeting Dr. Fancourt Barnes showed a tumour weighing 4lbs., removed from a woman aged 30. It was sub-peritoneal, with a thick pedicle composed of uterine tissue. "This he transfixed, and tied and returned into the abdomen; the patient had recovered without a bad symptom. He thought it better to tie and return the pedicle, when possible, than to treat it with the clamp."

I shall doubtless be met with the objection that in this case, and also that of Dr. Fenger, the tumours were pediculated to the fundus, and that they were not cases of hysterectomy, but I quote them because in both cases the pedicle was of uterine contractile tissue, and yet there was no hæmorrhage from the stump. That of Dr. Bantock was a case of true sub-peritoneal hysterectomy, though that successful hysterectomist usually repudiates such a procedure.

At the meeting of the Society on Jan. 23rd, 1889, Dr. Bantock brought before the Society a case of fibroid of the uterus, which had been confided to him by Dr. Vincent Jackson, of Wolverhampton. The patient was 34 years of age, and the tumour had existed for five years. There was great difficulty experienced in raising the tumour out of the abdomen, and it was found to spring from the left aspect of the fundus. "The short fleshy pedicle was transfixed with a needle carrying a double ligature, and each half was slowly tightened, the whole being encircled by another ligature; the stump was pared on each side obliquely towards the centre. The edges were then approximated, and the peritoneal covering on each side was

stitched together with cat-gut sutures . . . The weight of the tumour was $2\frac{1}{4}$ lbs. The result of the operation was not given. The hæmorrhage was the only thing to be feared, and that might be avoided by proper attention to the application of the ligature, and by not leaving a great piece of stump to slough away inside the peritoneum." The reference here made as to probable sloughing inside the peritoneum seems a little inaccurate, as if the peritoneum was sufficiently secured over the stump the sloughing would take place sub-peritoneally.

In the discussion that followed Dr. Bantock said : "Some pedicles would be insecure and dangerous, no matter however carefully they were tied." . . . He had tried both plans, and it was his want of success with the ligature that had led him to have recourse almost invariably to the extra-peritoneal treatment. . . . He had applied the double ligature, transfixing it in addition to a circular ligature, and even stitched the peritoneal edges together ; yet before the operation had been completed, oozing had often begun. "He insisted on the fact that patients did not usually die from the hæmorrhage, as such, but from septicæmia, due to the decomposition of the ooze. That was why the using a drainage tube was advised. It must be that they feared the oozing from the stump of the pedicle, for there was nowhere else it could come from. He would be very glad if a method could be devised to overcome the difficulties and drawbacks, as the recovery took much less time. Hitherto, however, he had heard of no such method which would give them such assurance against hæmorrhage as they could obtain from the extra-abdominal method." In answer to these remarks I contend that if the peritoneum can be got to heal over the stump, any oozing must take place beneath the peritoneum. It is a healthful sign when we see such a successful operator by the extra-abdominal method longing for a safe way of treating the stump intra-abdominally. Mr. Lawson Tait at the same discussion said that "he regretted nothing so much as having been induced to try the intra-peritoneal treatment of the pedicle."

At p. 269 of vol. v. of our Journal, there is a note by Dr.

Rakuza, of Odessa, taken from the Transactions of the Third General Meeting of Russian Medical Men at St. Petersburg, 1889, on supra-vaginal amputation of the uterus. In five cases an intra-peritoneal operation was performed with three recoveries and two deaths from peritonitis.

Dr. Rakuza's general deductions are these :—

(1) The extra-peritoneal method gives by far better results than the intra-peritoneal.

(2) Even under strictest antiseptic precautions, the intra-peritoneal amputation is always associated with the danger of a secondary infection (through the cervical canal).

(3) The operation is justified only in cases of pedunculated fibroids, and in such ones when the stump is very short.

Here, again, is, I think, an error in expecting septic mischief through the cervical canal, for if the operation be properly performed the cervical canal is shut off from the peritoneal cavity, and becomes securely sealed in about forty-eight hours.

At the meeting of our Society held February 26th, 1890, Mr. Reeves brought forward a case (see vol. vi. of our Journal, p. 72) of a patient aged 28, who had a tumour extending to $2\frac{1}{2}$ inches above the umbilicus. "In that case, after tying the broad ligament, he tied each uterine artery separately and treated the stump after the intra-peritoneal method. This case was one of a small series that had perfectly recovered." "He took the precaution to destroy the cervical canal by means of Paquelin's cautery, and he left in a drainage tube for a day or two."

(Mr. Reeves does not say how he treated the stump nor why he inserted a drainage tube. If the stump were covered over with flaps of peritoneum there would be no need of a drainage tube. He also omits to say anything of the progress of the case, whether there was any rise of temperature, &c.).

"He particularly commended the practice which he suggested, of tying the uterine arteries separately, which had for effect to prevent hæmorrhage. He thought that they would soon be able to show that the removal of the uterus in pro-

perly chosen cases would have as little mortality as ovariectomy with the intra-peritoneal treatment of the pedicle."

In the discussion that followed I asked for more information as to the treatment adopted by Mr. Reeves in respect to the cervical stump. Did he sew the peritoneum over it? Did he take no other precaution against hæmorrhage than the ligature of the uterine arteries?

Dr. Bantock said "that the very first case in which he removed a fibroid tumour from the uterus he had secured both arteries, and then put another ligature around the body of the uterus, dividing the uterus into a sort of double flap. He stitched those two flaps together, and in spite of that there was oozing from the stump enough to cause the patient's death, though the amount did not exceed an ounce. . . . That case had led him to rely exclusively upon the extra-peritoneal method." I cannot help thinking that in this case Dr. Bantock failed to secure the peritoneal flaps over the stump—if he had used Lembert's suture the result might have been different.

Dr. Bantock went on to say that "the uterine arteries were not the only vessels supplying the body of the uterus, for there were twigs supplying the cervix, which furnished quite enough blood to carry off the patient, unless proper precautions had been taken. He thought that in spite of all that had been said to push forward the intra-peritoneal method . . . the extra-peritoneal method would be ultimately found most saving of life."

Since this paper was written Mr. Reeves has published an article on "Hysterectomy" in the *Medical Press* of November 25 and December 9, in which he says:—"The great danger to be overcome is the old one of bleeding. Various plans have been devised to prevent secondary hæmorrhage, one of the most successful of which, in some hands, has been the use of the elastic ligature round the cervix, which is dropped back into the pelvis. Some years ago I drew professional attention to a more surgical method of dealing with the pedicle, by first tying the uterine arteries on

either side of the cervix." He then narrates one or two cases, especially one, the specimen from which he exhibited at this Society. He ligatured the appendages in the usual way, then, securing the broad ligaments by long pressure forceps he divided them down to the level of the inner os, and secured the uterine arteries by ligatures passed by an aneurism needle close to the cervix. He advocates the passing of the needle through the vaginal roof—a proceeding that I consider inadvisable, as such a puncture opens a channel for sepsis and is fraught with some risk to the ureters. In conclusion, he says: "To have finished with the operation when the abdomen is closed, to do away with a mortifying stump and the attendant dangers of its breaking away and falling back, to be rid of peritonitis, septicæmia, and secondary hæmorrhage, must be great gains, and the rapidly increasing experience of Continental operators in the method I advocate tells more than I can say or write in its favour. A Dutch operator at Leyden has had forty-four cases with four or five deaths. Dr. Chrotak, of Vienna, has had ten, chiefly by this method, all successful . . . and several other operators have adopted it with most encouraging results. It only remains for British operators to do likewise and to have similar results."

At a meeting of the Gynæcological Society of Chicago, held January 17th, 1890, and reported in the *British Gynæcological Journal* (vol. vi., p. 242), Dr. Henry Byford referred to a case of vaginal fixation of the stump in abdominal hysterectomy. He showed a pair of forceps for use in this method whereby the stump of the cervix brought through the anterior *cul-de-sac* is clamped and held in the vagina. In the case Dr. Byford referred to, he left the elastic ligature on. In a few days the temperature arose to 102° F., when he introduced a Sims speculum and cut off the stump. The patient did well. In another case the cervix, similarly treated, on being released turned up again into the connective tissue behind the bladder, and took up a normal condition, though entirely extra-peritoneal. This patient also recovered.

At another meeting of the same Society, held April 18th,

1890, Dr. Henry Byford exhibited a small fibroid, the stump of which he had treated in the same way. He said: "This makes six cases on which I have operated in this way, all recovering. It is a method, I think, that has not been tried by anyone else. The operation is simply this: the broad ligaments are tied off, the uterus amputated below the tumour, and the stump is sewed up somewhat after Schroeder's method, but with cat-gut and silk-worm stitches. The bladder is separated, an opening made down into the vagina in the anterior fornix just against the cervix. The silk-worm gut sutures, left long, are used for traction, and the cervix is drawn down and forward into the vagina, and a clamp put on from the vagina . . . The clamp prevents the contact of the slough with the patient's parts, and avoids septic trouble. After I turn the stump down, I sew the peritoneum from behind the bladder to the posterior wall of the cervix. There is no raw surface left for extensive adhesive inflammation in the pelvis, with its consequent peritonitis, and obstruction of the bowels."

In the discussion which followed Dr. Martin said: "The only objection that I can offer to the operation performed by Dr. Byford is that for a nervous, rapid operator, the procedure is altogether too long. Dr. Byford spends from two and a-half to three hours in performing this operation, and while the abdominal cavity is perfect after the stump is secured . . . at the same time it is very tedious and a great many operators, even good ones, would object to doing it on that account. It seems to me that this method of treating the pedicle is an advantage over the fixation of the stump in the abdominal wall by means of clamps, inasmuch as it does not interfere in the slightest with the bladder, and it does not leave an ugly, depressed cicatrix."

At a meeting of the American Gynæcological Society held in September, 1889 (reported in vol. vi. of our Journal, p. 521), Dr. Henry Byford read a paper on "A New Method of treating the Stump in Abdominal Hysterectomy." He says: "An ideal method of treating the stump in all cases of ab-

dominal hysterectomy has not yet been discovered, and probably never can be. Each case will require the employment of a method adapted to the character and relations of the tumour.

"Meinert first suggested the vaginal fixation of the stump, recommending turning the stump into the vagina through an incision into the recto-vaginal *cul-de-sac*. The objections would be the difficulty of access to the *cul-de-sac*, the necessity of separating the bladder so as to prevent traction, and the obstacles that might be encountered in cutting off the end of the cervix in case sloughing should occur, and septicæmia follow. The raw surface left by the separated bladder could not be easily covered by peritoneum, and thus an extra raw surface would be left for the peritoneal cavity to manage.

"There remains one other method, a variety of vaginal fixation, which has not, I believe, either been suggested, recommended, or employed except in the case I am about to report. To avoid an unnatural ventral fixation, I turned the stump into the vagina and chose a procedure which seemed to me, and still seems, the most direct and best one for the purpose. It consists in sewing up the short stump somewhat after Schröder's manner, separating the bladder from the uterus, opening the anterior fornix near the cervix, turning the stump forward into the vagina and fixing it there by a pedicle-pin, introduced from the vaginal side, and a small gauze tampon placed in front and over it. By separating a flap of peritoneum from the posterior surface of the stump, before trimming it and introducing the stitches, and introducing them under it, this flap may be united to the vesical peritoneum, and the peritoneal cavity be protected from the stump. In case a rapid operation is desirable, the pedicle may be included in a clamp or rubber ligature, and turned forward into the vagina without suturing. When sloughing commences, the clamp or ligature and sloughing tissue can, if necessary, be cut off by the aid of a Sims speculum."

He then narrated a case in which he left the rubber ligature on the cervix, and though the abdominal drainage

tube formed a communication with the vaginal opening, the patient got well.

Dr. Henry Byford brought forward yet another similar case before the Gynæcological Society of Chicago, on Feb. 20th, 1891, reported in our journal for August of last year, p. 228.

In the discussion which followed, Dr. Watkins said : " I am very much pleased with Dr. Byford's treatment of the stump. I do not see any reason for treating the stump by abdominal fixation, when we have this method, which is so much better. Vaginal fixation causes little, if any tension, diminishes the risk of infection, and also leaves much less raw surface to heal."

Dr. Byford, in closing the discussion said : " In regard to the safety of the operation, I would state that I have done it fourteen times with one death, and that was due to septic peritonitis above the incision, while the peritoneum below, in the bottom of the pelvis, was normal."

In a discussion on another paper of Dr. Byford's, before the American Gynæcological Society, September 17th, 1890, on the same subject, Dr. Skene suggested " dilatation and inversion of the cervix, which would fill the indications without wounding the vagina at all."

I think we must wait for a report of more cases done on this plan ; but it seems to me that the dilatation and inversion would take up a considerable time, and be very difficult, and there would be serious risk of interfering with the ureters.

Dr. Dudley had tried inversion after dilatation, and found it exceedingly difficult. The entire removal of the stump was also difficult and dangerous.

In the American Journal of Obstetrics for April, 1890, there appeared a paper by Dr. James Goffe, of New York, on " A new method : the intra-abdominal but extra-peritoneal method of disposing of the Pedicle in supra-vaginal Hysterectomy for Fibroid Tumour, with report of four successful cases."

He says : " Dr. Martin, of Berlin, has enunciated the broad principle, which I think we all recognise, that the only way to finish any abdominal operation is to restore the parts to their proper relations in the pelvis. The disastrous consequences

from hæmorrhage and sepsis that attended the intra-abdominal treatment of the pedicle led to the method of fixing the stump in the abdominal wound. Thus far this extra-peritoneal method has given the best results. It is not free from danger, however, the best operators losing from ten to fifteen per cent. Moreover, the objections to it, even in cases that recover, are many. The convalescence is prolonged and tedious. The sloughing stump makes a disagreeable, nasty wound, and after recovery results in an unsightly scar. The constant dragging upon the abdominal wall is also an undesirable *sequela*. Moreover, as Dr. Wylie has pointed out, the presence of this stump in the abdominal wound favours the production of hernia. The broad ligaments, too, are put upon the stretch to an unnatural degree, and the bladder is compressed and restrained from its proper functions. There is no question about it—the intra-abdominal method is the ideal treatment. The only condition is can you make it safe—safe from hæmorrhage at the time of the operation, safe from the subsequent hæmorrhage, and safe from sepsis due to suppuration of the stump? "

He then narrates four cases :—

Case I., aged 40, married, never pregnant, ill three years.

Case II., aged 41, married, 3 children, ill seven years.

Case III., aged 29, single, ill two years.

Case IV., aged 35, married, never pregnant.

His method of operating was shortly as follows. In the *first case*, the bladder was dissected off the face of the tumour, over which it was spread, to a height of about six inches, an elastic ligature was thrown around the entire mass, and the tumour cut away. The pedicle was transfixed and tied within the flap, below the elastic ligature; the stump was then trimmed down, and the raw surface of the separated bladder stitched over to the posterior flap of the stump. The patient did well till the fourth day, when the temperature rose, and the next day to 102° F. The os uteri was then dilated, pus was evacuated, and after frequent irrigations the patient got quite well, and went out in a month from the date of the operation. The ligature came away in three to four months.

From this case Dr. Goffe argued that if all the raw stump could be covered with peritoneum, there would be no fear of the escape of any pus into its cavity.

In Case II., therefore, anterior and posterior flaps were stripped off the uterus, the stump transfixed and tied inside the flaps and the whole stitched over with catgut. In this case also no abnormal symptoms occurred till the fourth day, when the temperature rose to 101° F. The os uteri was then dilated, drained and irrigated, the ligature and slough coming away on the ninth day. She was well in a month.

In Case III. there was some hæmorrhage from an assistant making too strong traction, so that the uterine end of the broad ligament slipped out of the ligature ; this was, however, secured. In this case, too, the rise of temperature took place on the fourth day, and was treated in the same way as the others, the ligature and slough coming away on the seventeenth day, and the patient was up in a month.

In Case IV., through an error in diagnosis, an exploratory incision was closed, but the major operation took place three weeks later. In this case, owing to the shortness of the broad ligaments, clamps were placed on them, incisions were made down to their tips, and the peritoneum divided and stripped from the uterus, back and front. The pedicle was transfixed and tied, and then a continuous suture of cat-gut was applied from the outer end of one broad ligament and over the stump of the cervix to the outer end of the opposite broad ligament, " so that all there was to be seen in the bottom of the pelvis was smooth peritoneum, with this continuous line of cat-gut suture running across from side to side." Temperature rose on the fifth day, the cervix was treated as already described, and the ligature and slough came away on the fourteenth day. The patient left the hospital in five weeks.

Dr. Goffe further adds : " In regard to the operation itself, while each of the different features has been used by different operators, I know of no one having combined them all into a systematic method till I did so myself. . . . The advantages are that it has all the elements of safety that any

of the operations in use have, and, I believe, more ; moreover, it leaves no ligature in the pelvis to give trouble, and above all, it restores the organs to their proper relations in the pelvis."

I think those who desire to see the operation of hysterectomy improved on a more scientific basis, will agree with me that the operation as devised by Dr. Goffe is a step in the right direction, and that eventually we shall be able to control the hæmorrhage, not merely at the time of the operation, but also to lessen the chance of subsequent oozing.

We now come to the important address on the present position of abdominal surgery by Mr. Meredith, and the discussion on the same before the Medical Society of London on April 14th and 21st, 1890.

Speaking of ovariectomy and its former high mortality, he said, " The use of the *clamp* was undoubtedly the most direct factor in the causation of this mortality. . . . The dangers attending the use of the clamp chiefly arose from the ready channel thereby afforded for the entrance and spread of septic material in the peritoneal cavity ; while the further risks of hæmorrhage on its removal, and the subsequent prolonged and tedious convalescence, would now appear to have constituted amply sufficient reasons for its condemnation long before the year 1878, when it was finally abandoned in favour of the intra-peritoneal ligature."

Coming to the subject of *uterine tumours*, he said : " Until ten years ago the results obtained in this branch of abdominal surgery were eminently unsatisfactory ; treatment of the uterine stump, whether by intra-peritoneal ligature, or by extra peritoneal compression with the old-fashioned ovariectomy clamp, being followed by a terrible mortality, due either to hæmorrhage or to septic poisoning."

He then goes on to describe the operation as at present more generally performed with abdominal fixation of the stump, directing the careful securing of the ovarian arteries (meaning to include, I suppose, the uterine arteries, which are far more important, though he does not mention them), but which, if efficiently done, so far prevents the probability of hæmorrhage

as to make possible the securing of the uterine stump intra-abdominally.

After this he goes on to say, "the treatment of *pedunculated* uterine outgrowths by intra-peritoneal ligature (myotomy), and subsequent sealing of the stump, by uniting the edges of the peritoneal investment by sutures is a very successful procedure in properly selected instances, and its further consideration need not here detain us."

Since the sealing of the stump in these pedunculated cases is performed on the contractile tissue of the uterus, and has proved a success, surely we may hope that it can be successfully carried out with sections of the same tissue lower down.

In the discussion which followed, Mr. Treves, speaking of hysterectomy in cases of uterine fibroids, said, "The blood-vessels going to the mass were easy to find and to ligature; they were mainly the ovarian, the uterine and the ovarian branch of the vaginal arteries. Having secured these, the ligaments on each side were divided, and a V-shaped section of the cervix was made, leaving a kind of flap on each side. When the tumour was removed in this manner, a large gash was made in the peritoneum, and after this was stitched up there remained a closed seam running across the pelvis. He contrasted an operation such as this, based on ordinary surgical principles, with the use of the *serre-nœud*, which might be described as a barbarous instrument, to be compared only with the clamp in ovariectomy, and like it to be ultimately abandoned. The results he had so far obtained by the above method were admirable."

Mr. Skene Keith said "he agreed with Mr. Treves' remarks about hysterectomy; if that operation were to stand, the stump must be left inside; but he held that in tumours with a very thick solid stump the *serre-nœud* must be used."

With regard to this remark of Mr. Skene Keith, I will only say that even in very large fibrous tumours of the uterus the cervix proper is often not invaded, and it is remarkable how small a stump can be obtained even in these cases, and if it

should happen that the fibroid invades and spreads out the cervix it is possible by enucleation so to reduce it as to obtain a comparatively small stump.

Mr. Lawson Tait, in the course of a severe criticism of Mr. Treves' remarks, said "His (Mr. Treves') method was not new. We had had all this over and over again any time these fifteen years. It was the 'stage' method of Schröder, and even in his hands had a mortality of 30 per cent., and all of us had tried it with most disastrous results. A uterine stump from which a myoma had been removed was unlike anything else in the human body known to him. It was as hard as cartilage, and as brittle as cheese, so that a ligature would cut through it, or it was so completely infiltrated with serum that a tightened ligature would be quite loose in a few hours, and the vessels would bleed even at the end of forty-eight hours."

Venturing to differ from so great an authority as Mr. Lawson Tait, I must maintain that such stumps, so hard and so brittle, are not those usually met with, but the cervix uteri is remarkably tough; and with regard to the recurrence of bleeding, if all the vessels going to supply the uterine tumour are previously quite securely closed, there will be no bleeding, and should any arise it will be underneath a closed peritoneum, and any subsequent suppuration can be evacuated after the method of Dr. Goffe and myself, as will be related presently.

Mr. Lawson Tait himself proceeded to say, "We all know perfectly well, that if we could secure the vessels in our stumps effectually, and then drop the stump back in the abdomen, we should have at once, in all probability, a 5 or 6 per cent. mortality for these dreadful operations."

I am glad to see that Mr. Lawson Tait seems to regard the closure of the blood-vessels the crux of the operation, and the only difficulty that bars the way for the intra-abdominal treatment of the stump, so that we may still live in hope of seeing this satisfactorily accomplished, and an hysterectomy which leaves the parts without any strain upon them established as a possible fact.

Mr. Greig-Smith (Bristol) said: "There was no doubt

that in hysterectomy for fibroids, the intra-peritoneal method of treatment of the stump was the operation of election; but undoubtedly the worst cases—those most completely justifying removal—could not be treated in this way. No doubt we all aimed at devascularisation of the pedicle; and if we could get the cervix completely free of true muscular tissue, well free of ureters and bladder, and if the severed uterine canal could be covered with peritoneum, then we might safely treat the stump intra-peritoneally. One factor in the intra-peritoneal treatment he would regard as almost essential to its adoption, and that was the freedom of the stump from uterine fibre."

I would here point out that there is a far larger proportion of connective tissue in the cervix than in the body of the uterus, so if we are able to secure the stump of pedunculated fibroids growing from the body of the uterus, we ought more easily to be able to secure the cervical stump.

Dr. Elder (Nottingham), said: "Passing on to the treatment of the stump in hysterectomy, he was quite at one with Mr. Treves in regarding the clamp as the relic of a barbarous age, and thought the day was not far distant when it would be relegated to the limbo of antiquity, and its use superseded by an intra-peritoneal method more in accordance with the advanced surgery of to-day."

Dr. O'Callaghan (Carlow), said: "As to hysterectomy, it was utterly impossible to treat cases in the way which Mr. Treves had described." I trust Dr. O'Callaghan, in view of the cases brought forward in this paper, will see a reason to alter his view of the impossible.

In the *Lancet* of November 29th, 1890, there appeared a paper on "Supra-vaginal (abdominal) Hysterectomy with the Scissors: a contribution to the Discussion on the treatment of the Uterine Stump," by H. N. M. Milton, of the Cairo Hospital. He says: "The almost universal condemnation (as reported in the medical papers) of the method advocated by Mr. Treves during a recent debate on abdominal surgery lends a certain interest to the record of the following three

cases, in which a similar method was pursued." The points to be aimed at, he said, were, "To prevent hæmorrhage during operation and cicatrisation, and to place the wound in the best condition for rapid healing. For the prevention of hæmorrhage, two methods presented themselves: (1) ligature of the pedicle *en masse*; (2) ligature of the vessels separately. The simple ligature of the pedicle is evidently unreliable . . . while the *serre-nœud*, if a necessity, is but a necessary evil. On the other hand the arteries of the normal uterus are most easy to find and ligature. All the ovarian arteries and veins are easily included in the ligature of the broad ligaments. The uterine arteries and veins, passing up as they do along either side of the cervix uteri . . . can be grasped, after reflection of the peritoneum under which they lie, with ordinary artery forceps. The blood supply of a uterus increased to many times its original size must, of course, be modified."

He then proceeds to describe the operation. He shows that the blood supply can be efficiently controlled, even when the vessels are large, by ligaturing them separately; he then describes the preparation of the uterine stump: "By making a semi-lunar incision in the peritoneum, commencing laterally at the level of the os internum and passing across the front of the uterus an inch or so above the utero-vesical fold, to the corresponding point on the other side, and by separating the included peritoneum from the uterus . . . a peritoneal flap may be turned down for some two inches, carrying with it into safety the bladder. A similar posterior flap may then be turned down, the incision being on a slightly lower level than the anterior one; and by separating the peritoneum from the sides of the cervix uteri at the points of union of the incisions, all fear of injuring the ureters may be avoided. The practicability of the above methods was evidenced by the three cases in which it has been employed, all of them having been successful. In all three cases the only instruments used after the abdominal incision was completed were scissors, forceps, and needles."

CASE I.—A negress, aged 28, severe hæmorrhage ; sound passed $5\frac{1}{2}$ inches. The broad ligaments were tied in two sections outside the ovaries. The flaps were formed as described above. "The tissues on either side of the cervix, containing the uterine arteries and veins, were then seized in two places with artery forceps outside the reflected peritoneum and snipped through. The uterus was then slowly snipped across just below the point where the cervix expanded into the enlarged body." There was scarcely any loss of blood. "A wedge-shaped fragment was snipped along the centre of the cervix, and the two lips thus formed roughly united with a couple of cat-gut stitches. All vessels held in the artery forceps were then tied with medium-sized cat-gut, and the peritoneal flaps united with a continuous cat-gut suture over the stump, the line of union extending from the point of ligature of one broad ligament to that of the other. . . . The aspect of the peritoneum was strikingly perfect ; all one saw was a dry glistening surface, with a narrow line of union passing across the pelvis. No drainage tube was used. Stitches removed on the sixth day. On the tenth day she was up. The tumour, after draining, weighed 7 lbs."

CASE II.—A negress, aged 30. Profuse hæmorrhage, with great pain. Operation similar to Case I. Patient well in six days.

CASE III.—An Egyptian, aged 32. Extreme anæmia from severe hæmorrhage. Similar operation. Patient up on the twelfth day.

In his remarks at the end of the paper, Mr. Milton says : "It seems to me that whenever a uterus can be sufficiently isolated to allow of a *serre-nœud* being tightened round its cervix, it will be equally possible to pick up the uterine vessels and to raise peritoneal flaps The extreme facility of the operation when performed on a comparatively small tumour is an argument for an early operation, and when one considers the perfect condition in which the peritoneum is left, it may be anticipated that the operation in the hands of skilled operators will be but little more dangerous than an exploratory abdominal section."

In the *Lancet* of September 26th last year, Mr. Milton writes that he has had another operation, also successful, making four cases with four recoveries. On March 8th of this year he operated similarly on a pregnant uterus at term. The patient was a fellah woman, primipara, aged 23. She had been in labour 100 hours, and was completely collapsed; the pelvis was greatly deformed, membranes ruptured three days previously, head jammed in the pelvis. She revived for a few hours after the operation, but died at seven next morning.

In the May number of our Journal in the Summary of Gynæcology, is a paper (p. 99), by Dr. Widenham Maunsell, of New Zealand, wherein he advocates both for fibromata and Porro's operation the fixing of the stump extra-abdominally, but instead of sewing the peritoneal flaps over the end of the stump, he spreads them over the outside of the abdomen, lightly stitching the edges of the skin; thus the decomposing stump is inside a sort of peritoneal saucer, and is quite cut off from any chance of infecting the peritoneal cavity.

Dr. Maunsell, in a paper read before the Otago Branch of the New Zealand Medical Association in 1887, described an intra-peritoneal (*i.e.*, sub-peritoneal) method of treating the stump, which consists in sewing the peritoneal flaps over the cervical stump; but he also vivifies the cervical canal so as to produce a complete closure of the canal, with the view of preventing any septic absorption—a method which I venture to think inadvisable, as closing the natural exit to any sub-peritoneal suppuration.

The last quotation I shall make will be from a paper by Mr. John McArdle, of St. Vincent's Hospital, Dublin, in the *Medical Press* of July 15th of last year, entitled "The Treatment of the Pedicle after Myomectomy and Hysterectomy." He details the case of a woman aged 42, with a tumour weighing 22lbs., whom he operated upon October 20th, 1889, in the usual way with abdominal fixation of the stump. On the tenth day she became suddenly very ill from the necrosed

stump having got drawn into the lower angle of the wound, and from which there was rather free hæmorrhage. She died the same day. Commenting on this case, he says:—"Tendency to sepsis, weakening of the abdominal wall, interference with the bladder and rectum, and the danger of cough or straining causing yielding of the attachments of the stump, as in my case—all have had due weight in causing me to discard the extra-peritoneal method, just as most of us have long since bidden an eternal adieu to the clamp and cautery for ovarian pedicles. There can be no doubt but that the intra-peritoneal is the ideal method, but though I have succeeded with it I am forced to admit that if there be any truth in statistics, the relation of recoveries to deaths is very much in favour of the unscientific procedure. . . . Now, there must be some way of accounting for this. Wherein lies the greater safety of the crude operation? Can anything be done to lessen the mortality in the ideal? Where is the little deficiency which has so lamentable a result?

"I have studied the cause of death in the fatal cases which followed the intra-peritoneal operation, and I find that sepsis, sloughing of pedicle, hæmorrhage, uræmia, secondary abscess, and exhaustion, are the most frequent, and in the order named.

"One thing is becoming clearer every day, and that is, the necessity of avoiding solutions of antiseptics which in any way interfere with the action of the peritoneum. Another point equally clear is the advisability of dealing with the stump in such a way as to avoid either necrosis or acute inflammation, if it is to be dropped into the abdomen."

He then refers to the too forcible temporary compression of blood-vessels, the damage to the uterine tissue by the application of the cautery or astringents, and says: "As far as I know, the greatest success achieved by the intra-peritoneal method is where it was possible to cover the stump thoroughly with peritoneum."

He sums up as follows:—

"(1) That notwithstanding the apparently high death-rate

after the intra-peritoneal method, it will, with improvement in technique, rapidly follow the similar operation for ovarian pedicle to its proper position in surgery.

"(2) That anything—cautery, astringents, &c.—which will lower the vitality of the stump to be dropped into the abdomen, must be avoided.

"(3) That where the peritoneum of the stump is insufficient, the neighbouring omentum should be pressed into the service as in enterectomy.

"(4) That undue pressure during provisional occlusion of the vessels must not occur.

"(5) And that solutions which tend to produce any change in the peritoneum should be avoided as flushing material."

While I am writing this paper there appears in the number of the *Medical Press* for September 30th, p. 338, in the report from the correspondent at Vienna (which, by the way, is very badly reported), the following passage:—

"Eyon v. Braun Fernwald gave the history of a case where the woman bore her last child thirty years ago. She was suddenly attacked with pain, and observed for the first time a swelling in the lower part of the body, and soon after bleeding commenced." Professor Rokitsky treated the fibroma with Apostoli's method, and, he imagined, successfully. Fernwald found a tumour the size of a man's head, the os uteri admitting three fingers, through which was felt a large foetid discharging mass. The reporter goes on to say, "Laparotomy was performed by cutting in the linea alba." Now, could anything be more absurd, or savouring of ignorance than such a sentence? As if he would say, "a flank incision was made in the central line," "opening the peritoneal cavity, &c., and removing it [I suppose he means the uterus] in its entirety." Yet he goes on to say, "On reaching the tumour, it was found to be immovable, broken up with perforations that were discharging profusely. The ovarian tubes on both sides were ligatured and cut, the whole removed except the stump, which was finally sewn to the peritoneum,

and the abdomen closed. All healed within three weeks without any untoward symptom."

We have here the history of another case by another operator, when the stump was healed sub-peritoneally, and the case did well.

Dr. Sinclair, in a letter to the *British Medical Journal* of November 14th, 1891, on Apostoli's treatment of uterine fibroids, ends thus: "Still there is a residuum of cases which not only justify but demand hysterectomy when all other measures have failed, and I confess that this residuum has a tendency to expand as one's experience of the improved operation of myomectomy increases. This operation consists in abdominal section, drawing out the uterus with its tumour, amputating so as to obtain flaps which will come together without tension, carefully finishing the stump like a plastic operation, by bringing the anterior and posterior serous coverings together, dropping the stump into the pelvis, flushing and draining. . . . So far all my cases of myoma operated on in this way—ten or a dozen—have recovered as after ovariectomy, and indeed there are no dangers inherent in the proceedings which are not involved in an ovariectomy of moderate difficulty." I disagree with Dr. Sinclair as to the necessity of draining if all bleeding points are secured.

I will now proceed to relate as briefly as possible my own experience.

CASE I.—S. T. W., aged 55, married nineteen years, never pregnant, admitted into Warrington Lodge, August 28th, 1890. Felt tumour in left vaginal region two years ago; has grown more rapidly lately; almost constant pain. First flooding one year ago. *Abdomen*.—Hard tumour up to umbilicus. *Vaginal Examination*.—Cervix low, widely spread over an intra-uterine fibroid. Uterine sound passes up on left, then forwards to right, then backwards $8\frac{1}{2}$ inches. On passing finger through os tumour can be felt. The cervix was divided slightly bilaterally, tumour felt, adhesions not very strong to uterine cavity. Four days afterwards tumour was found pressing more downwards.

The next day cœlio-hysterectomy was performed. Abdominal walls thin; incision from pubes to one inch above umbilicus; tumour drawn out of abdomen; elastic ligature placed round its base; uterine wall cut round about one-third up, and tumour shelled out of its bed in the cervix. Profuse hæmorrhage owing to the slipping of the vessels from under the elastic ligature; two of them were of about $\frac{1}{4}$ in. in diameter—these were tied separately. The elastic ligature was tightened, the stump was then trimmed down and mopped with hot carbolized oil. The peritoneum was then sewn tightly over the stump with an uninterrupted suture of china twist with Lembert's stitches. On the elastic ligature being relaxed the stump did not bleed, except one small spot, which was ligatured. A large vessel then bled in the left broad ligament, which was tied. As there was still some oozing, a large sponge wrung out with tincture of matico was packed into the pelvis. Fourteen sutures of silkworm-gut were passed through the abdominal walls with Reverdun's needle and three superficial. The sponge was removed and the wound dressed with dry dressing. The operation lasted eighty minutes. The tumour weighed 6 lbs. 13 oz. It was exhibited to the Society at the meeting on January 22nd in this year. The uterine tissue had shrunk exposing half the tumour, and the uterus seemed to be lying on the upper part of the tumour and outside the portion of uterine tissue that contained the tumour. In spite of the tumour having been felt through the os uteri before the operation, it was the opinion of the Fellows of the Society that there were not two uterine cavities.

The patient did very well till the second day, when the temperature rose. The stitches were removed on the seventh day. Abdominal wound healed. On the 18th September—sixteen days after the operation—as the temperature indicated the formation of pus, I passed the sound very carefully through the os uteri to the extent of $2\frac{1}{4}$ inches, and evacuated a quantity of thick offensive pus. (I had not at that time seen Dr. Goffe's paper quoted above, where he had followed the same line of treatment.) This had to be repeated from

time to time, and the cervical canal syringed with carbolic lotion. She ultimately got quite well, and was discharged October 8th—thirty-six days after the operation.

CASE II.—J. H., aged 35; married ten years; had no children; thinks she had two abortions. Was admitted into Warrington Lodge, February 24th, 1891. Catamenia free, lasting seven days. Has been ailing seven years. Several medical men had seen her, two of whom thought her pregnant. She had felt a lump in the abdomen for about $2\frac{1}{2}$ years. Periods had become less free and frequent. On coughing has pain in the hypogastrium. Walks fairly well. *Discharge* yellow and offensive.

Abdomen.—Tumour rather soft, as of indistinct fluid; soft fibroid or fibroid-cyst. *Vaginal Examination.*—Os uteri and cervix small. Rather high up in left posterior aspect of the pelvis and also in front of the cervix, is a large wide tumour, not so hard as an ordinary fibroid. Pressure on abdomen moves tumour and uterus. Uterine sound, upwards, forwards, and to right $6\frac{1}{2}$ inches.

Operation.—Cœlio-hysterectomy on February 27th. Dr. Dudley Buxton administered the anæsthetic. Dr. Haslam assisted, and there were present besides, Dr. Macnaughton Jones, Mr. Bowreman Jessett, Mrs. Scharlieb, M.D., and two students and Dr. Marshall.

Incision umbilicus to pubes—main tumour lifted out when another was found deep in the pelvis on the right, continuous with the other. This, too, was brought out of the wound. The broad ligaments which were short were then clamped on each side with long bladed forceps and divided, and elastic rubber tube was passed round the base and the tumour cut away. Owing to the combined base of both tumours being very broad there was a large cut surface left without much depth, and as this rapidly contracted there was profuse hæmorrhage; the stump was then seized with forceps and the uterine arteries ligatured with chromicised catgut. When some more of the cervix (fibrous tissue) was cut away there ensued further hæmorrhage, which was controlled with ligatures. I wish here

to bear testimony to the able management by Dr. Dudley Buxton of the patient during anæsthesia, to which I attribute in no small degree the success of the operation.

Sponges filled with tincture of matco were packed into the pelvis and the whole length of raw surface laced with an uninterrupted chromicised catgut suture, the uterine stump being sewn with Lembert's stitches. All hæmorrhage ceased; the pelvis was sponged out, and the wound closed with fourteen silk-worm sutures. Owing to the hindrance from the hæmorrhage the operation lasted two hours seven minutes. The tumour weighed $3\frac{1}{2}$ lbs.

On the uterus being opened a small sessile polypus, the size of two peas were found situate just below the opening of the left oviduct. The left tumour had growing from its upper left aspect several hæmorrhagic tumours; which on being incised exhibited blood-stained walls of about $\frac{1}{4}$ inch. Both ovaries were enlarged about three times, and on being incised presented vascular districts with rather large blood vessels. The temperature before operation 96.8 to 98°F . There was considerable shock from the loss of blood. After the reaction she did fairly well for a few days, but on the fifth day the temperature gradually rose till on the eighth day it reached 103.4°F . The stitches were all removed on the sixth day; wound well healed, duckbill speculum passed, cervix held with a hook and sound carefully introduced into the os uteri, it passed only $\frac{1}{2}$ inch and no pus was evacuated. The roof of the pelvis on the right felt full and hard, no pain. On March 7th, *i.e.*, the 8th day, the swelling was more marked, an aspirating needle was passed into the swelling, nothing withdrawn but a few drops of blood. The next day (March 8th), Mr. Bowreman, Jessett saw her with me, when, as the bulging was very decided I made a deep incision through the most prominent part in the right *cul-de-sac*, and some blood and broken down blood clot, rather offensive, were evacuated, the wound was stretched with forceps and packed with iodoform gauze. Notwithstanding this opening the swelling increased until it rose above the right groin and the line of

suture could be traced across the abdomen. The patient left the hospital fairly well, April 8th, and feeling no pain.

I will not take up the time of the Society by detailing the history of this hæmatocele. It had to be opened several times, and on one occasion some offensive pus came through the os uteri. At last I put her under ether, and partly by dilating the old opening and partly by incision made a larger hole and inserted a thick drainage tube, an enlarged Greenhalgh's rubber stem, as the bulging top would retain it in place. Through this the cavity, which contained pus and blood and had a rough interior, was syringed frequently.

This hæmatocele probably occurred owing to some small arterial twig having been omitted in the ligaturing, and although it is much to be regretted as retarding the patient's recovery, yet it is a most fortunate complication to have arisen in this stage of the investigation, as it has afforded proof that if the peritoneum is given time, say forty-eight hours, and it has been well sutured, its healing is so secure that we need have no fear of any pus or blood escaping into its cavity. The peritoneal floor of the pelvis was in this case lifted up by pressure from beneath until it could be felt above the brim of the pelvis, and yet the suturing held, and as far as the operation was concerned, was a success.

The third case was that of a woman, A. H., age 46½, married twenty and three quarter years, and had one child, born twenty years ago. Had been under a specialist at one of the Metropolitan Hospitals for fibroid of the uterus. This doctor saw her about every six months, said he could do nothing for her, and that if she was operated upon she would probably be dead in twenty-four hours. However, the tumour grew rather rapidly, and at a consultation with Dr. Bantock, May 11th of last year, in view of this rapid growth we agreed upon an exploratory operation. She was admitted into Warrington Lodge on May 27th. A hard tumour was felt in the abdomen. *Vaginal examination.*—Os uteri rather patent and granular, uterus jammed up on the right anterior aspect of pelvis just behind os pubis. Uterine sound.—Upwards,

forwards, right, then back $4\frac{1}{2}$ inches, on the left, and pressed down into the pelvis is a very hard mass not easily movable.

The operation was performed on June 2nd.

Abdominal incision from just below umbilicus to pubes; walls thin, front of tumour covered with left broad ligaments, and oviduct considerably elongated and thickened. Left ovary deep down, not felt. The broad ligament was partly separated from the tumour and the oviduct tied and divided. The tumour was found, an unusual occurrence in fibroids, to be extensively adherent to the bottom of the pelvis. It was separated from these, and it and the uterus drawn up out of the abdomen. An elastic ligature was passed round the cervix—the tumour was then peeled off the uterus to which it was intimately adherent on the left upper aspect—in doing this the uterus was considerably torn. The peritoneum was then divided above the level of the inner os and peeled down; the cervix was transfixed and tied with silk in halves inside the peritoneal flaps, and the uterus together with the right ovary and oviduct cut away. There was some bleeding from the corner of the left broad ligament which was secured with catgut, and the uterine arteries on the other side separately. The pelvic peritoneal wound was then closed with an uninterrupted suture of chromicised cat-gut, the peritoneum over the stump of the cervix, with Lembert's stitches. Some bleeding points in the pelvis from the torn adhesions were then ligatured, the light falling well into the pelvis as the patient's head was towards the window and the body tilted up. A sponge wrung out of tincture of matico was temporarily packed into the pelvis. The wound was closed with 13 silk-worm sutures, and a glass drainage tube inserted because of the torn pelvic adhesions. The operation lasted 1 hour 35 minutes. On the sixth day the stitches were removed. Pain in region of left ovary and coloured discharge on June 11th and 12th. Glass tube removed on 3rd day. Indications of suppuration supervened and pus came from the os uteri on July 6th. I passed a pair of forceps up the os uteri and brought away the silk ligature that was around the cervix, and also the chromi-

cised catgut ligature that was around the uterine artery. From that time she did well and left July 15th.

In this case the closed peritoneum over the uterine stump held and resisted the suppuration of the cervical tissue going on just below it.

I will now briefly sum up the lessons to be learnt from the cases and discussions that we have been considering.

(1) No two cases are alike—we cannot therefore lay down any hard-and-fast rule for the treatment of the stump; the fibroid invading the uterus in so many ways and situations, a certain choice must ever be left to the operator, but that we are to bear in mind that, where it is possible of application the sub-peritoneal method holds out as good a prospect of success as any other, and leaves the other pelvic organs free and unfettered by any constriction or adhesion.

(2) That Dr. Byford's method does not commend itself because of the length of time the operation takes, and it is open to the grave objection of manipulation being required both in the abdomen and vagina in the course of the same operation.

(3) That Dr. Skene's suggestion of dilating and inverting the cervical canal is very difficult practically, and has the same objection against it of associated vaginal and abdominal manipulation.

(4) The best methods, it appears to me, are those of Dr. Goffe and Mr. Milton and so far carried out in a modified way by myself.

The main points in the operation seem to be :—

(1) Make the peritoneal flaps sufficiently large, as they can be reduced, but not added to.

(2) Secure absolutely every bleeding branch of the uterine arteries, if possible, separately.

(3) Lace the whole pelvic peritoneal wound across with an uninterrupted suture of chromicised catgut, taking care that Lembert's stitches are used over the uterine stump, so that it is entirely sealed with peritoneal covering.

It is recommended that the cervical stump be divided as

low down as possible, for the proportion of connective tissue to contractile tissue is greater than in the upper part of the uterus, where a contractile tissue prevails; there will therefore be less shrinking the more the amputation is carried through the cervix proper.

I would also point out the great advantage of using tincture of matico as a styptic where there is any oozing—it is very effectual and seems to do much less harm than others.

There remain three points for discussion:—

(1) Shall we use a drainage tube? I think where there have been any adhesions and consequent oozing, a drainage tube should be used, for at all events forty-eight hours; but where, after the pelvic wound is laced across, the pelvis remains quite dry after sponging, there is no necessity for any drainage.

(2) Shall the cervical canal be destroyed by the actual cautery, or any other caustic? This is an important point and had better be discussed in connection with the question—

(3) Shall the cervix be transfixed and tied like the pedicle in ovariectomy, inside the peritoneal flaps?

I think if the blood-vessels are quite secured on each side of the cervix, so that there is no bleeding, it is better not to tie the cervical stump, as such ligature tends to set up suppuration in connection with the cervical canal, and recovery is retarded until the ligature is extruded from the os. But the question of the destruction, *i.e.*, complete occlusion, if possible, of the cervical canal, will have to be weighed. If the canal is obliterated, the chance is very much lessened of any suppuration taking place, unless the very means used for its obliteration should tend to set up suppuration; on the other hand if the canal is left patent, *i.e.*, up to its roof of superimposed peritoneum, though the canal is in connection with the vagina, and the air may tend to induce suppuration in the cut end of the stump, with its lessened vascularity, yet the canal at the same time being open, the pus can easily be evacuated, and the risk of any pus finding its way into the peritoneal cavity is reduced to a minimum. I am inclined,

therefore, to recommend that the canal be left patent, cleansed, if thought advisable, by a syringe full of solution of perchloride of mercury or carbolic acid, and the vagina kept as antiseptic as possible by a tampon of iodoform gauze or other means.

I here close this, I fear, too lengthy paper, and trust that it may be the means of calling attention to a method of performing the operation of hysterectomy that, when we have mastered its details, will prove more scientific than the abdominal fixation of the stump, will leave the parts with their relations unaltered, and pain from unnatural tension impossible, and that will give results, as shown in the numerous cases that have recovered among those related in this paper, that, considering the greater gravity of the operation, will compare not unfavourably with those we have arrived at in ovariectomy.

The CHAIRMAN objected to the practice of alluding to the extra-peritoneal method of treating the stump as a "crude" operation. It was not their duty as surgeons to consider their operations as if they were anatomical exercises; their object was to save human life, and it mattered nothing to them whether they had a sloughing stump or not if by that method they obtained a greater saving of life. To apply the term "crude" to an operation which gave such vastly superior results was a piece of sensationalism which was quite uncalled for when discussing a matter of scientific interest. He protested once and for all against any such misleading designation. He would caution them, too, against the tendency to generalise on the strength of a few cases. It struck him, in listening to many of the quotations made by the author, that there was no justification for the attempt to lay down such broad lines of conduct for the guidance of operators. He pointed out that tumours weighing six, eight, or ten pounds, might easily and with propriety be removed by the intra-peritoneal method. It was when they came to deal with tumours weighing twenty, thirty, or even forty pounds that it became necessary to seriously consider which operation to select. Unless, therefore, one's experience com-

prised not only a large number but also a great variety of cases—tumours in fact of all dimensions—they had no right to attempt to generalise. He pointed out that in nearly all the cases quoted by the author there had been formation of pus, endangering the patient's life. It was evident that any operation that involved the formation of pus out of sight and out of reach of drainage ought to be looked upon with suspicion. He was sure these remarks would commend themselves to surgeons generally, irrespective of the particular operation under discussion. Then, again, to talk of tying the ovarian and uterine arteries as easily as did some of the persons quoted by the author, positively made one smile. What, he asked, would these sanguine operators do if they were face to face with a large tumour rising out of the pelvis and lifting up the pelvic floor like an eight months' pregnancy, stretching the broad ligaments until they virtually ceased to exist. When the tumour was removed the pelvic peritoneum and the broad ligaments were removed with it. How would they proceed then to tie their arteries or clamp the broad ligaments? It was "finniking" to talk of tying the broad ligaments under such circumstances, yet these were the cases that they had to consider. To give such advice was distinctly wide of pathology. Personally he had only a relatively small experience of these operations—eighteen or twenty. Ten of these had been done by the intra-peritoneal method, but they were easy cases. The others were extra-peritoneal. He had been fortunate enough so far not to lose a case, but all his anxieties had been caused by the intra-peritoneal operations.

Mr. LAWSON TAIT said that he could not possibly express his feelings on this question more concisely and clearly than had been done by the Chairman. He agreed that it was amusing—positively amusing—to hear men who had had only four or five cases, talking about the ease with which this or that could be done. One gentleman talked of making a flap at the level of the os internum, but in most of his cases the tumour, as soon as it came into view, was seized by the assistants and sliced into long before they could possibly

know whether they were dealing with the uterus or not. It was not until it had been removed that they found out what was the size and condition of the uterine cavity. Besides, the variations in each case were such that no kind of rule could be made to apply to them all, or even to most of them. With an experience of many hundred cases he solemnly asserted that in the absence of some great discovery—of a kind not as yet even hinted at—the intra-peritoneal method was impossible for general adoption. His experience was that by the extra-peritoneal method the mortality of hysterectomies need not exceed 5 per cent. provided that they had not been treated by electrolysis in advance. He had only just operated in a case in which electricity had previously been employed, followed by the galvanic puncture, with the result of causing a vesico-vaginal fistula. This was in a patient who had had no children, and it was said to have followed a febrile attack consequent on this electrical treatment. In that case the patient died, and *post-mortem* it was found that death was due to hæmorrhage from a large vessel included in the clamp behind. Whether therefore the clamp method was crude or not it was at present the only method susceptible of general application. He related that on the preceding Saturday he had done a hysterectomy, and the pedicle was so small that he had been unable to resist the temptation to adopt Schröder's method. He had put in a drainage tube because of the possibility of hæmorrhage, and in order that he might be warned of its occurrence. Things went on all right until Monday afternoon, when profuse hæmorrhage set in. Fortunately this had ceased, but he found, that very morning, an abscess had formed in the stump, and in all probability he would be called upon to re-open the abdomen in order to evacuate it. It was rubbish to talk of an operation being crude. Scientific operation meant their bringing into play the most exact knowledge they possessed about a given matter, and short of some altogether fresh light upon the subject he intended in future to adhere to the extra-peritoneal method.

Dr. ADOLPH RASCH regretted that German should seem to be so little read by the gentlemen who brought papers before the Society, as so much was done abroad which deserved the most careful attention also of English gynæcologists.

Dr. Rasch pointed to two important points in the intra-peritoneal treatment of the stump—the prevention of hæmorrhage and suppuration. These important points seemed to be gained by the method of Schröder, improved in some details by Brennecke of Magdeburg, to whose very important and successful cases he directed the attention of Dr. Smith and others (*Zeits. f. Geburtsh. u. Gynæcol.*, vol. xxi.). By carefully placing continued catgut sutures from the bottom of the stump wound, one row above the other until the peritoneal ends are reached, all bleeding seems to be completely controlled, and the parts moreover are so well approximated that no cavity remains. Thus the healing *per primam intent*, is attained, and no room left for accumulation of noxious fluids. The intra-peritoneal treatment of the stump seemed also to Dr. Rasch the ideal one, and every improvement of it would cause it to be more and more adopted. In certain difficult cases it seemed the only one which made an operation possible.

Dr. BANTOCK proposed, Mr. JESSETT seconded the adjournment of the discussion, and, this being agreed to, the Society adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, FEBRUARY 25TH, 1892.

WILLIAM DUNNETT SPANTON, F.R.C.S.ED., VICE-PRESIDENT,
IN THE CHAIR.

PRESENT: 20 Fellows and 2 Visitors.

Drs. Murtry, Molson, and Cannaday were elected Fellows of the Society.

The following were proposed for election: F. F. Schacht, Earl's Court; William Travers, M.D., Kensington.

Typical Specimens of Fibroid Tumours of the Uterus.

BY G. GRANVILLE BANTOCK, M.D.

MR. PRESIDENT AND GENTLEMEN,—I have here seven specimens of fibroid tumours of the uterus, illustrating six different methods of operating by abdominal section. These methods are as follows:—

(1) Enucleation of tumour and obliteration of bed of tumour by means of buried and other sutures. Appendages also removed.

(2) Application of *serre-nœud* to pedunculated fibroid, leaving uterine body, ovaries and tubes intact, and securing the pedicle in lower angle of wound.

(3) Application of *serre-nœud* around the uterus about level of internal os, and including both ovaries and tubes; amputation above or external to *serre-nœud*, and securing the stump in lower angle of wound (parietal).

(4) Application of elastic ligature, circular division of uterine envelope, partial enucleation of uterine body with its contained tumour or tumours, so as to lessen strain on broad ligaments, application of *serre-nœud* on peritoneal

aspect, amputation of uterus, and securing stump in lower angle of wound. In this form, the appendages may be included in *serre-nœud*, ligatured separately or even left intact, according to circumstances.

(5) Division of broad ligaments to allow tumour to be lifted out of the pelvis, elastic ligature, enucleation of tumour, application of *serre-nœud* so as to include the appendages, and securing the stump in lower angle of parietal wound.

(6) Elastic ligature, enucleation of tumour and uterine body, after circular division of uterine peritoneum, application of *serre-nœud* to uterine body thus enucleated, separate ligature, and removal of appendages, and securing the peritoneal envelope to parietes.

The first is an example of the intra-peritoneal method; the others are examples of the extra-peritoneal method.

I shall not occupy your time with details of the history and symptoms of the cases under treatment. I will only remark that in all the cases the conditions were such as not only to justify, but to demand, surgical interference.

I.—The first specimen, then, illustrates one of the methods of intra-peritoneal operation. The patient, E., aged 49, married late in life and sterile. The tumour occupied the posterior aspect of the fundus, and by its weight so depressed and retroverted the organ as to cause the elongated cervix to protrude at the vulva. The abdominal incision was made long enough—viz., about four inches—to allow the enlarged uterus to be brought outside. While held in this position a perpendicular incision of about two inches was made through the capsule, and this tumour, which weighed two ounces, was enucleated. The raw surface was then obliterated by a buried continuous suture of catgut in two stages, and the closure of the peritoneal edges was effected by a continuous suture of No. 3 china twist. The uterus, with several small fibroids embedded in its substance—too small to require removal, and too deeply situated to attempt it with safety—was allowed to fall into its place, and the appendages were removed in the usual way. Although there was then no oozing I felt confident there would

be some sooner or later, and therefore before closing the wound I passed a drainage tube into the bottom of Douglas's pouch. It was well I did so, for the drainage tube yielded a bloody fluid for six days. The operation was performed on October 21st, and so far there has been no return of the menses. The bracing up of the uterus by the ligatures on the broad ligaments kept it well suspended in the pelvis, and as it may be confidently anticipated that the enlarged uterus will gradually diminish in size, a recurrence of the descent and protrusion of the cervix will be prevented.

This case illustrates the advantage of the drainage tube—I may say its necessity—in this method of operating. The danger of its withdrawal too soon is forcibly shown in the report of a case operated on by Dr. Howard Kelly in May last. "The tumour mass was exposed and delivered through the lengthened incision. After tying off the broad ligaments and down to the base of the mass, a rubber ligature was thrown around the uterine pedicle below. . . . The mass above the provisional ligature being cut away, and the portions of the remaining pedicle being trimmed so as to allow the approximation of the opposite faces, the cervical canal was cauterized and the raw surface of the pedicle obliterated by buried interrupted catgut sutures. The peritoneal surfaces were approximated by silkworm gut, and the pedicle [? stump] suspended in the lower angle of the wound. A drainage tube was put in above the pedicle [? stump]; *there was no hæmorrhage*. The first dressing of the tube was made next day, twenty-four hours after the operation. Cotton over the tube slightly moistened, the plug in the tube thoroughly saturated with *dark clotted blood*. Six pledgets of cotton used in cleaning the tube, the last scarcely moistened. The tube was therefore removed.

"The temperature after removal of the tube went up in the evening to 102° F. by the rectum—101.5° F. by the mouth" and the pulse rose to between 140 to 150. "The drainage tube was again inserted," but it was too late, the mischief was done, and "the patient died on the fourth day."

I may here remark that I consider it a great mistake to leave the tube for twenty-four hours without removing its contents, and a still greater mistake to remove the tube while there is so much blood in the pelvis, as there evidently was in this case. My own practice is to have it emptied every *two* hours as long as there is any stain on the sponge, and not to remove it until the fluid has become pale and thin—in fact serous.

II.—The second specimen is an example of the pedunculated fibroid tumour, of which the pedicle was treated extra-peritoneally. This specimen, which weighed $2\frac{1}{2}$ lbs, was obtained from a single woman, aged 33, by occupation a lady's maid. Finding that the tumour was attached to the fundus by a pedicle nearly half an inch long, that the tumour was absolutely solitary, and that the ovaries and tubes were apparently healthy, and bearing in mind that the patient was engaged to be married, I decided to do no more than remove the tumour. I therefore at once applied the elastic ligature and cut away the tumour. An examination of the tumour will show that the raw surface measures over two inches in diameter. Recalling the fact that in more than one instance of pedunculated fibroid, like this, I had failed in arresting the bleeding by ligatures and sutures, and had been compelled to resort to the *serre-nœud*, and that all my cases of this kind had recovered, I lost no time in applying that instrument here. In this case I am happy to say that the instrument has not betrayed my confidence, and I can still point to an unbroken record:

III.—The third specimen is an example of multiple pedunculated fibroids from a single woman, aged 35, a teacher of music. The operation was performed on December 18th, and the mass weighed over $6\frac{1}{2}$ lbs. The largest mass—as large as a child's head—filled the pelvis, bulging down into the vagina, causing her difficulty in micturition and defæcation. The others occupied the abdominal cavity. On turning out the whole mass I found it easy to apply the *serre-nœud* well behind the ovaries and as low as the level of the internal os,

without undue strain on the supporting pin. The operation was very simple, and when the stump was removed on the fourteenth day the hole was not larger than the diameter of my little finger. An examination of the specimen will show that the uterine body is only very slightly enlarged. The cavity measured only $2\frac{1}{2}$ inches, and there was no hæmorrhage or excess of menstruation. But the large mass, which so filled up the pelvis that it was difficult to extract it, caused pressure symptoms which were very distressing to the patient, and ere long, especially as the tumour was growing very rapidly, must have resulted in serious kidney trouble. I have a duplicate of this specimen in the form of the fundus uteri, with two pedunculated fibroids, springing from near the fundus. The patient was a married but sterile woman, aged 37. The operation was performed on February 10th, and the two tumours weighed about 2lbs. It would have been quite easy to treat these pedicles by ligature, but as there was a large hydro-salpinx, on the left side, and a commencing one on the right side, it appeared to me the simplest method to apply the *serre-nœud*, after emptying the contents of the tube, so as to include the appendages on both sides. This appeared to me much to be preferred to the leaving of some ten or a dozen ligatures in the peritoneal cavity, and the result has justified the means, for the patient has made an unusually satisfactory recovery.

IV.—The fourth specimen, an example of the intra-mural fibroid, was obtained from a married sterile woman, aged 40, on December 16th, 1891. On turning out the uterus I first applied the elastic ligature below the tumour, then divided the capsule and enucleated this mass, which weighed over 1lb. You can readily believe that I was not prepared to hazard the attempt to obliterate such an extensive and vascular surface as the bed of a tumour of this size. There was a great strain on the broad ligaments, and the elastic ligature was so deep down in the pelvis that I could not think of applying the *serre-nœud* at once. The ovaries were also deeply placed in the pelvis, and quite sessile on the tense broad ligament, so

that there was no chance of removing them with safety. I therefore resorted to the plan I had devised about seven years ago to meet the difficulty presented by such a case. This consisted in the division of the peritoneal envelope all round the uterus about three inches above the elastic ligature, and subsequent partial enucleation of the uterine body. This allowed the latter to be drawn out, lessened the strain on the broad ligaments, and enabled me to apply the *serre-nœud* about an inch above the elastic ligature, and transfix the stump with the supporting pin without undue pressure on the parietes. There was considerable hypertrophy of the lower segment of the uterus, and the stump was unusually large, but by the daily tightening of the *serre-nœud* the hole left, on the removal of the stump, was scarcely larger than in the preceding case. As the patient was very stout I also took the precaution of not closing the whole thickness of the parietes tightly around the stump as formerly, but left the lower angle slightly open, as regards the skin and intermediate layers, for about a quarter of an inch. Into this angle, I inserted a narrow strip of iodoform gauze to act as a drain. The result was excellent. Formerly I used to draw the whole thickness of the parietes close around the stump, but in fat subjects it was not uncommon for a mixture of serum, blood, and melted fat to collect at the angle of the wound above the stump and there become purulent, with inevitable local and constitutional irritation. Of course I did not leave the peritoneum open, but closed it separately with two sutures of catgut (cut short), in addition to the suture by which I always unite the edges of the peritoneum to the back of the uterus behind the wire. There was not the slightest irritation of the wound, and the bottom suture, *i.e.*, next the stump, showed no tendency to cut, although it was left in till the stump came off on the fourteenth day.

V.—The fifth specimen was obtained from a single woman, aged 34, a governess, by abdominal section, on January 28th; along with the part of the uterine body it weighed 4lbs. On vaginal examination, the os uteri was found raised upwards

and forwards behind the pubes by a large mass which filled the pelvis and obliterated the posterior lip of the cervix. It was just one of those cases in which one might have been tempted to attack the tumour by enucleation through the vagina. On exposing the mass by a median abdominal incision, the fundus first presented, standing out prominently an inch or so above the general mass. In front were two fibroids, which were at once enucleated. I then attempted to raise the large mass behind out of the pelvis, but could make no impression on it until I had divided the broad ligaments on each side close to the cornua, any bleeding being provided against by temporary ligatures and forceps. I was now able to raise the mass sufficiently to slip an elastic ligature behind it; enucleation was then effected through a perpendicular incision. The tissues in the lower segment of the uterus forming the capsule were very much hypertrophied, and the elastic ligature was still very deep in the pelvis. By forcible elevation of the uterine body I was able to apply another elastic ligature more than an inch in advance of the first, and in the groove thus formed I put the wire of the *serre-nœud*. Fortunately this was well below the deepest part of the bed of the tumour, and high enough to allow the supporting pin to be passed through the stump and rest on the parietes without undue tension. I was also able to include both ovaries and tubes in the *serre-nœud*. The operation was concluded as in the last-described case.

VI.—The sixth illustrative specimen was removed from a single lady, aged 49, on December 19th. The patient was under the care of Dr. Horace Howell, of Boundary Road, who assisted me in the operation, and conducted the after-treatment. The tumour weighed 2 lbs. After the delivery of the uterus, through an incision about 4 inches long, an elastic ligature was applied around the uterus, and the tumour was enucleated through a perpendicular incision, the uterine cavity being opened in the process. The uterine body was now enucleated from its peritoneal investment as low as the junction of the body with the cervix, and the *serre-nœud* was applied as low

as possible. The elastic ligature was then loosened, and the vessels of the broad ligament temporarily secured by large-pressure forceps until the appendages were ligatured and removed. As there was still some bleeding—probably from enlarged branches of the circular artery of the cervix—several ligatures were applied to the envelope. These ligatures were of catgut, to obviate the necessity of removing them. Finally, the uterine envelope was secured to the parietes by three double sutures on each side, tied over a small roll of gauze, to prevent their sinking in under the strain, and a single suture at each angle of the wound. The stump was trimmed close down to the *serre-nœud*, and the cavity was packed around the *serre-nœud* with iodoform gauze. Although there was then no oozing, yet within twenty-four hours considerable bleeding occurred from several parts of the uterine envelope, requiring the application of tincture of iron. This has occurred several times in similar cases, in spite of the greatest care to secure all bleeding points, and it is probable that in the future I may sear all the raw surface with the actual cautery as an additional precaution.

These cases contrast very unfavourably with the other extra-peritoneal methods as regards the period of convalescence. Yet, in my opinion, there is no method of treating these deep-seated tumours that yields such satisfactory results as this.


I am well aware that in the expression of this opinion I shall not carry with me the assent of Mr. Reeves or Dr. Heywood Smith. The former has recently advocated the intra-peritoneal treatment in the pages of the *Medical Press and Circular*, but he has failed to give us the amount of experience on which he founds his advocacy. If he will give us the data necessary for forming an opinion, then we can estimate the value of the method. But as far as I can gather, his paper was more of the nature of a suggestion than a record of his experience, and it reminded me of a suggestion made some time ago, that in the case of large tumours the mass should in the first instance only be withdrawn from the peri-

toneal cavity, that the wound should be closed around the pedicle, and that some days afterwards, when adhesion had taken place between the opposing peritoneal surfaces—visceral and parietal—the tumour should be amputated. I am not aware that this method has ever been put to a practical test.

Dr. Heywood Smith, in the paper read at the last meeting of this Society, also advocated a method of intra-peritoneal treatment, which he supported with several cases. In the course of his rather extensive review of the literature of the subject, he referred to my own first case, and expressed the opinion that if I had only used Lembert's suture the case might have terminated differently. This, I must say, appears to me to be trifling with the subject. In that case, after securing the broad ligaments, in the way since recommended by all the advocates of the intra-peritoneal method, I put a ligature around the uterus itself, about the level of the top of the cervix, then so divided the uterine tissues above this ligature as to make two flaps. I carefully brought these two flaps together by means of closely-applied sutures. Finally, with the view of sealing up the stump, I caught it up with the two lowest sutures of the parietal wound. At the close of the operation the stump was absolutely dry and bloodless, yet there was sufficient oozing from the stump to kill any patient. Dr. Heywood Smith admits that his method is very similar to, but of course with an improvement upon, a method advocated by Dr. Goffe, in the *American Journal of Obstetrics*, and supported by the details of the cases. All I have to say on this matter is this, viz., that a method which, almost of necessity, seems to invite suppuration (or the formation of a hæmatocele), and to require dilatation of the cervix for the removal of ligatures, and by which the patients seem to me to have escaped, as it were, by the "skin of their teeth,"—has not much to commend itself to our notice. I agree with Dr. Heywood Smith in objecting to Mr. Reeves' ligatures for the circular artery of the cervix. The whole thing, to my mind, is more like an anatomical demonstration on the dead

body, than a serious application of surgery to the living subject.

Now it is a remarkable fact that Dr. Martin of Berlin, who has probably had the largest experience of the intra-peritoneal method, and is a man of wonderful skill and resource, has been compelled by the force of circumstances to abandon it for what at first sight appears a much more difficult and hazardous proceeding, viz., complete extirpation of the uterus ; and I have no hesitation in prophesying that Mr. Reeves and Dr. Heywood Smith will arrive at the same conclusion as Dr. Martin after half the amount of the experience he has had. I have always allowed that there are a few cases in which it may be perfectly safe to adopt the intra-peritoneal method. Such is the case of the small sub-peritoneal or intra-mural fibroid in which the uterine cavity is not opened, as in the first instance I have brought before you to-night. Such also is the case of the pedunculated fibroid, provided the pedicle be not too large and too vascular. In these cases, however, I still prefer the intra-peritoneal method, for I have had uniform success with it. But I do not regard it as a safe proceeding when the tumour is as large as the fourth example I have shown you. Nor do I think the method is rendered more safe by the addition made to it by Dr. Carl Braun of Vienna, which consists in securing the uterine wound to the parietes in the line of the abdominal incision, with the view of preventing blood or pus from entering the peritoneal cavity and providing for its exit through the peritoneal wound. This, you may remember, was the method I adopted in my first case, as long ago as 1878 ; but it miserably failed. Nor is more reliance to be placed in the method advocated by Dr. Howard Kelly. This you will find described, illustrated and supported by the details of a solitary case, in the *American Journal of Obstetrics*, for April, 1889, p. 375, *et seq.*, which I think you will agree with me in regarding as a modification of Carl Braun's method. The case I have quoted from Kelly was operated on after this method, and you will not have forgotten the result—a result which supports my contention



The difficulty in these cases is to be sure that you have permanently controlled the bleeding. The first case I have brought before you to-night furnishes a striking commentary on this point and I feel sure that but for the drainage tube I should have had to record a different result.

How far Dr. Martin's new departure of complete extirpation of the uterus may be justified by the results, time will show ; but I have it on good authority that in his earlier cases his mortality was very high. This much, however, may be said of it, that it comes near to, if it does not actually supply, the desiderata required by Mr. Lawson Tait, that if the intra-peritoneal treatment is to supersede the extra-peritoneal, it must be by a method totally different from any hitherto advocated—an opinion in which I entirely agree with Mr. Tait. The same may be said of Pean's method of total extirpation *per vaginam*. It appears to me that the cases suitable for this method are just those in which the removal of the appendages yields such excellent results. I presume no one will contend that it is possible to remove a globular tumour of say 5lbs. or 6lbs. by the vagina with any degree of safety, if at all, or a case of multiple fibroids like my third example ; or that the method can compare favourably in such a case with any method by abdominal section.

I now come to a matter that has had much to do with my bringing these specimens before you to-night. They serve as the text for a reply to a paper which appeared in the May number of our Journal of last year. This was a re-publication of a paper by Dr. Widenham Maunsell, of Otago, New Zealand, "On Puerperal Hysterectomy, or Porro's Operation by a New Method." Dr. Maunsell also sent me a reprint of a paper read by him before the Otago Branch of the New Zealand Medical Association, on a "Successful Case of Supra-Vaginal Amputation of the Uterus and Ovaries for Concentric Intestinal Uterine Fibro-Myomata, &c. New Method of Treating the Stump." In the former paper Dr. Maunsell, after describing his method of performing Porro's operation, proceeds as follows :—"Over two years ago the above paper

(i.e., the second paper whose title I have quoted) was forwarded to the Gynæcological Section of the Intercolonial Medical Congress of Australasia. To my great annoyance it was refused admission on the erroneous supposition that it had been previously published in the *New Zealand Medical Journal*. With the exception of paragraph 4, describing the removal of the child, it is step by step and almost word for word *the same operation that I advocated for the extra-peritoneal method of treating the stump in uterine fibro-myomata*, published by me in the *New Zealand Medical Journal*, September, 1887, several copies of which I sent to a number of prominent medical men in the old country. Judge my astonishment on finding that all the details of my operation for the surgical treatment of uterine fibromas have been unwittingly appropriated by Dr. Bantock of London."

He goes on to say that Dr. Batchelor of Otago, had drawn his attention to some extracts from the last May and August (1890) numbers of the BRITISH GYNÆCOLOGICAL JOURNAL. After quoting these extracts he concludes with these words:—"On perusing the above paper (viz., in the September number of the *New Zealand Medical Journal*, 1887), I feel certain that Dr. Bantock will abandon all priority to the above method, which I have christened the deperitonised method of dealing with the stump of uterine myomata."

Now I may as well say at once that I am not going to abandon a claim I have never set up; for I have never performed Dr. Maunsell's operation nor am I likely to. Moreover I am of opinion that Dr. Maunsell will not long continue to perform this operation; that a little more experience will prove to him that it is not so valuable as he at present imagines. The operation I perform is quite different in its aim and scope from his, and I am not indebted to any one for a single idea in connection with it. I was not even aware of the existence of Dr. Maunsell, and it is needless to say that I had never seen any of his writings. It can, therefore, scarcely be said that I have unwittingly appropriated his method. But, further, in a paper which I read before the

American Gynæcological Society in September, 1887, "On the Treatment of the Pedicle in Supra-Vaginal Hysterectomy," you will find that as early as 1885, *i.e.*, two years before Dr. Maunsell's case, I had begun to partially enucleate (as Dr. Maunsell would say, deperitonise) the uterus, in order to relieve the strain on the broad ligaments in cases in which I could not otherwise include the ovaries in the loop of the *serre-nœud*, and I had already contemplated the further development of this proceeding in cases in which the tumour descended so low in the uterine body that I could not apply the *serre-nœud* with safety against retraction into the peritoneal cavity, and in such a manner as to allow the supporting pin to be used. Such a case, for instance, as that of Dr. Kelly's already referred to, in which the report says :—"The mass was developed so low in the uterus that it would have been impossible to elevate it sufficiently to treat the case extra-peritoneally with clamp or ligature." This is just the kind of case for which I devised and still reserve this method and in this I claim not only originality but also priority. I refer you back to the sixth specimen, in which the tumour involved the uterus so low as to obliterate the posterior lip of the cervix, as an answer to Dr. Kelly's statement.

Dr. Maunsell seems, as I understand him, to advocate his method in all cases of supra-vaginal hysterectomy done extra-peritoneally; but he does not tell us what amount of experience he has had; and while he advocates the same method in Porro's operation, it does not appear that he has ever put it to the test in a single instance. The latter, therefore, comes to us merely in the form of a suggestion, for, to quote his own words, Dr. Maunsell says:—"As far as I know, this method of treating the stump has never been tried or suggested before." These words are so ambiguous that I cannot satisfy myself as to what interpretation is to be put upon them. I, on the other hand, have arrived at my method or methods step by step, through a considerable amount of experience and, as I have already said, I reserve this particular method for special cases, viz., deep-seated fibroids, in

which it is impossible to apply the *serre-nœud* so as to include the broad ligaments. I might as well claim, and on much stronger ground, that Dr. Maunsell has borrowed from me the idea of reflecting the peritoneum, for my hospital operations are all done in public and it is impossible for me to control the use to which men put the knowledge thus obtained. But I make no such absurd claim. If Dr. Maunsell claims priority in advocating his method in all cases of supra-vaginal hysterectomy, he is welcome to it as far as I am concerned; but I am confident, after no inconsiderable amount of experience, that he will have few imitators and that he himself will not adhere to it very long. Cases like Nos. 2 and 3 are simplicity itself, and I cannot imagine any one of experience substituting a complicated process for it. But these cases are not met with frequently, unless under careful selection, and to the exclusion of difficult cases. At least they form but a small proportion of my cases. As to the results, they compare very favourably with any method of treatment.

I have frequently observed that operators of limited experience but unlimited imagination are very apt to draw important conclusions from slender premisses, which further experience has to correct. If they will only do as I have done—be in no hurry to rush into print with one or two cases but wait for a series of cases—so many dazzling suggestions would not be strangled in their birth. Nor do I think any man has any claim to attention until he has subjected his ideas to the test of experience. We hear talk of an ideal method. Well, I am not sure that I know the exact meaning of the expression. My ideal method is the one that leads to the recovery of the patient, but not by “the skin of her teeth” as in some cases quoted by Dr. Heywood Smith. It is remarkable with what obstinacy men cling to the argument that because the intra-peritoneal treatment of the pedicle in ovariectomy has led to such brilliant results, therefore the operation of supra-vaginal hysterectomy cannot be placed on a satisfactory footing until some form of intra-peritoneal treatment has

been devised. They *will* not see that the conditions are totally and essentially different. Men of large experience have given up the search in despair or disgust. The men of small experience, refusing to profit by the experience of their seniors, pursue the subject with youthful enthusiasm, and now and again we are promised the so-called ideal method but with the result that on each occasion one more is added to the list of disappointments. We know that even in ovariectomy there are still differences of opinion. One distinguished surgeon pins his faith on the cautery ; but where there is no pedicle, where does the cautery "come in?" Do not imagine for a moment that I wish to stop legitimate experiment. This is above all ages, an age of progress, and there is no finality in surgery, or in anything else. But what I desire men to do is to stick to hard facts and not to treat us to hypotheses and ideas instead.

Mr. BOWREMAN JESSETT: It appears to me that, with our present knowledge of the different methods of performing hysterectomy, it is very difficult to lay down any hard and fast rule as to which is the best method of operating in this or that case. As all know who are in any way versed in these distressing cases of myomata connected with the uterus, one rarely meets with two cases alike, and although we may have decided upon one plan of action before opening the abdomen, yet when the tumour and its surroundings are brought into view we may have to adopt a totally different course to that originally planned. I have brought here two specimens which illustrate this well. The first is from a patient aged 44, a fat and somewhat phlegmatic woman. She came under my care first on June 13th, 1891. She was married, but had no children and no miscarriages. Ten months before admission into the hospital she had a flooding, and another, very severe one, four months later, since which time she has never been entirely free from hæmorrhage. Sometimes she had considerable pain in the abdomen and back, especially on the right side. Micturition was very frequent. At this time there was a hard

solid tumour in abdomen, rising to within an inch of the umbilicus. *Per vaginam*, the uterus was found to be drawn up out of the pelvis, and it was with difficulty that the os could be felt. She had large varicose veins in one leg, and eczema on both legs. The patient was kept absolutely at rest for six weeks, and treated with iron and ergot. She left the hospital on July 29th, having had only one attack of hæmorrhage. She returned home and attended as an out-patient, but she very shortly had a severe flooding, and the eczema on her legs was most troublesome. She was re-admitted into hospital on September 17th, and again treated with rest and ergot and again had no return of hæmorrhage for six weeks, when she was discharged, October 5th, 1891. The measurements were: circumference of abdomen at umbilicus, 39½ in.; umbilicus to left iliac crest, 9 in.; umbilicus to right iliac crest, 8½ in.; umbilicus to ensiform cartilage, 7 in.; umbilicus to pubis, 8½ in. She had suffered a good deal from vomiting and constant desire to pass water.

Hysterectomy was suggested but postponed on account of patient's age, as it was hoped that at the menopause perhaps the hæmorrhage might cease. On December 30th, 1891, she again applied suffering from retention of urine, and had also had two very severe attacks of hæmorrhage. She was much blanched and her pulse feeble. She was admitted at once into the hospital and treated as before. She speedily picked up and begged that something might be done for her, so on Jan. 19th, 1892, I performed abdominal hysterectomy. The parietes were very fat. On opening the peritoneum a large tumour at once presented itself, the broad ligaments were seen stretching up from behind and some very large vessels were observed covering over the tumour, and the bladder was drawn over the front of the tumour for two-thirds of its surface; the uterus was found to be situated quite behind the tumour. I ligatured the broad ligament, including the ovarian artery in two places on each side, and divided the ligaments between the ligatures. I then proceeded to make an elliptical incision above the bladder, dividing the peri-

toneum and sub-peritoneal tissues. I then stripped these thoroughly down to the extreme lower border of the tumour. This incision extended from the incision dividing the broad ligament on one side to that of the other. I next made a similar elliptical incision through the peritoneum and sub-peritoneal tissues behind, and stripped the back, drawing the tumour and uterus well out of the wound at the same time. I next with an aneurism needle ligatured the uterine vessels on each side, and then proceeded to cut with scissors through the tissues first on the front of the os uterus into the vagina and then behind into the posterior part of the tumour. I then passed a strong ligature with an aneurism needle so as to embrace all the tissues and contained vessels on each side of the os, the ligature passing through the vaginal roof round the tissues close to the uterine neck. I then with scissors cut the tumour and uterus away, dividing the tissues between the uterus and ligature. Having thoroughly cleansed the parts, I passed a glass drainage tube from above downwards through the vagina and packed the space above with long strips of gauze, being careful to carry the end of each strip downwards through the glass drainage tube, which had been passed through the vagina. Finally, I stitched the two flaps together over the floor of the pelvis, being careful to evert the divided edges so as to adjust peritoneum to peritoneum. The cavity being well washed out, the parietal wound was closed with chromic gut in the usual manner, and the patient was put back to bed.

The patient was very collapsed after the operation, and died on the 21st, or thirty-six hours after the operation. At the *post-mortem* there was no hæmorrhage or peritonitis to account for death, and it can be only attributable to the unsatisfactory state of health she had been in for so long a time.

I see, since writing the above case, that Mr. Pearce Gould has operated on a patient much in the same manner, and I hope his patient may have done better.

I adopted this plan of operation, as it appeared to me that

to leave the os and neck of the uterus behind in a cavity bounded above by the peritoneum and below by the roof of the vagina, was unscientific and unsatisfactory. In a large number of the cases that have been done in this way there has been suppuration or an hæmatocele, which has caused the operator a good deal of anxiety and jeopardised the patient's life. Whereas if the os and neck is removed, and a drainage tube passed down through the vagina and the cavity formed by the removal of the parts packed with gauze which can be removed *per vaginam*, all chance of bagging of pus or the forming of hæmatocele is prevented, while at the same time the whole of this is treated extra-peritoneally.

I believe there are very few myomata of the uterus which may not be safely treated in this way. That the operation is easily performed there may be a doubt, but large tumours may be removed by this method as the vagina is always elongated to a very extreme degree, and therefore the more easily approached. The hæmorrhage is not severe if care is taken to ligature the ovarian and uterine arteries early. In these cases the elastic ligature is in my opinion an encumbrance and not necessary.

My second specimen illustrates an instance in which this form of operation would have been very difficult if not impossible to perform. The patient was a woman, age 40, who had a large myoma situated at the posterior aspect of the uterus and wedged firmly down into the pelvis. In this case, I divided the capsule over the tumour and enucleated it, and even then it was with the greatest difficulty that I could, even with the assistance of Mr. Wallace pushing it up through the vagina, extract it from the pelvis. The uterus I removed by the *serre-nœud* in the ordinary way and stitched the capsule of the tumour to the abdominal wound. This patient got well without a bad symptom.

With regard to ligatures I think silk is not to be relied on, as I have seen many cases in which suppuration has been thus caused, and an abscess formed which existed for some months or until the suture had come away either through the

abdominal wound or by the vagina. I always use chromic gut which I keep in a solution of perchloride of mercury and rectified spirit, 1 in 5000; these are always pliable, and will last for at least twelve or fourteen days before they become absorbed, and give no further trouble. I look upon chromic gut as the ideal ligature for all operations in the abdomen.

Dr. H. WIDENHAM MAUNSELL regretted extremely that he was not present at the last meeting of the Society when Dr. Heywood Smith read his paper on "Sub-peritoneal Hysterectomy." When the merits of "intra-" or sub-peritoneal hysterectomy were under discussion he thought Dr. Bantock was "out of order" in reading a pamphlet on the "Extra-peritoneal Method of dealing with the Stump." He took exception to the manner in which Dr. Bantock attacked his remarks which appeared in the BRITISH GYNÆCOLOGICAL JOURNAL last May on the "*Deperitonised* Extra-peritoneal Method of dealing with Uterine Myomata." He (Dr. Maunsell) first described that method in the September number of the *New Zealand Medical Journal*, 1887, where it was illustrated and its many advantages fully explained. It was a very curious coincidence that Dr. Bantock read a paper on "Hysterectomy" in New York, 14th September, 1887, in which he made a slight allusion for the *first time* to a somewhat similar operation for the extra-peritoneal method of dealing with the stump as that fully delineated by him (Dr. Maunsell) in the *New Zealand Medical Journal* of the same year and month.

He might not be able to claim any decided priority to Dr. Bantock in the conception of the "deperitonised *extra-peritoneal* method," but he could most assuredly do so in demonstrating its application and explaining its many advantages in the *much more important operation* "the *deperitonised intra-peritoneal* method of dealing with uterine myomas." A full description of this operation, with diagrams, appeared in the same number of the Journal in which he described the *extra-peritoneal* method. *Since then*, this operation has gradually found favour in America and Europe.

The operation which he now advocated for excision of

uterine myomas was practically the same that he described in 1887, with the important addition of complete extirpation. In those rare cases of myomata where hysterectomy was imperatively demanded, the uterus should be as completely excised as if it were invaded with malignant disease. He was of opinion that the retention of even the smallest particle of

FIG. I.

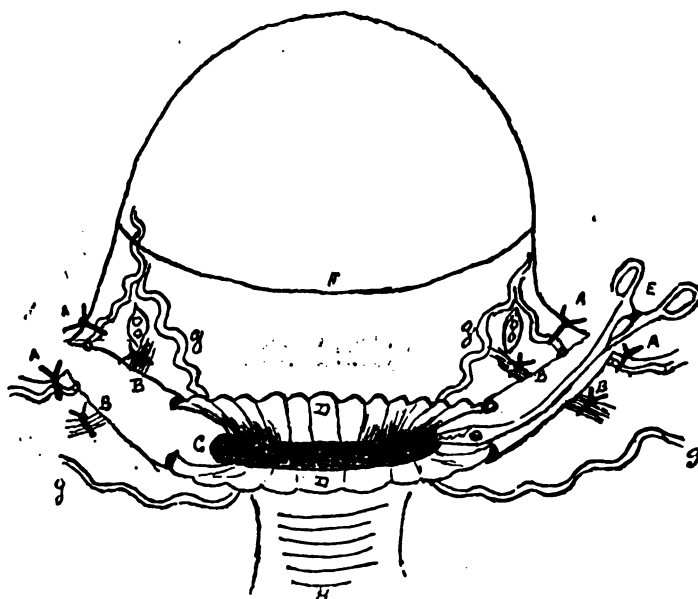


Fig. I.—A A A A, Double ligature of both infundibular pelvic ligaments with contained ovarian vessels. B B B B, Double ligature of both round ligaments. C, Large rubber tube tourniquet round base of myomatous uterus compressing uterine arteries, g g g g. D, Strip of thin mackintosh under rubber tourniquet. E, Strong pedicle forceps holding rubber tourniquet. F, Line for circumferential reflection of peritoneum.

uterine tissue must be considered an important element of danger by the surgical pathologist. Although Dr. Martin, of Berlin, had met with little success in "complete myomectomy," it should not be condemned, as the operative technique adopted by that eminent surgeon was faulty.

Dr. Maunsell then described the steps for the *complete extirpation* of the myomatous uterus by the "*intra-peritoneal deperitonised method*."

I. The vagina is rendered aseptic.

II. Make a median abdominal incision, and, if possible, drag the tumour outside the abdomen.

III. Double ligature the infundibular pelvic ligaments with their enclosed ovarian vessels on both sides and divide

FIG. 2.

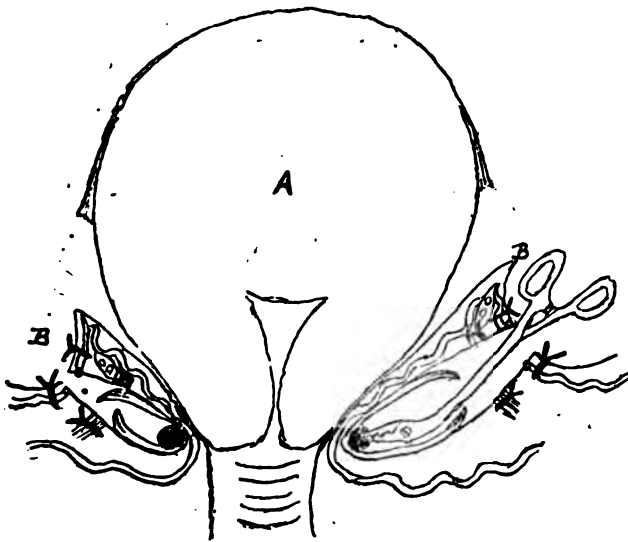


Fig. 2.—A, Vertical section of deperitonised uterus. B B, Reflected sheath of peritoneum with sub-peritoneal cellular tissue, ovaries and uterine arteries.

between them. Double ligature the round ligament on both sides and divide between them (see fig. 1). In this way the tumour is partly freed from its attachments and may be dragged somewhat up out of the pelvis.

IV. If the tumour is very large, and the patient anæmic, render it exsanguineous with Martin's rubber bandage. Apply a large rubber tube tourniquet tightly below the

cervix, and over a strip of mackintosh placed round the base of the tumour D D; clamp the rubber tourniquet with pedicle forceps E, and remove the rubber bandage.

V. With a small circular amputating knife cut through the peritoneum all round the junction of the middle and upper third of the fundus and rapidly reflect it by dissection with the *entire thickness* of the sub-peritoneal cellular tissue and its contained network of vessels right down to the rubber tourniquet (fig. 2, B B). While your assistants drag up the

FIG. 3.

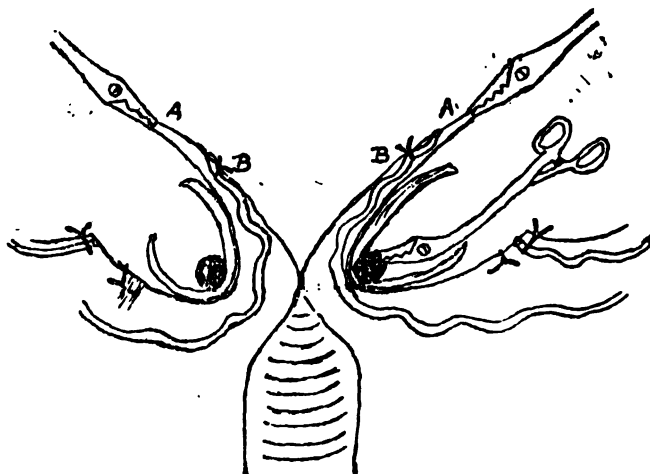


Fig. 3.—Vertical section showing complete removal of myomatous uterus. A A, Reflected peritoneal sheath held in strong pedicle forceps on either side; Ovaries removed from sheath. B B, Uterine arteries tied long on raw surface of peritoneal sheath.

deperitonised uterus, and you forcibly reflect back the peritoneum, the rubber tourniquet slips further down on to the upper part of the elongated vagina. With a few concentric sweeps of a scalpel *completely excise the neck and os of the myomatous uterus*. At this stage of the operation the os may be pushed up from the vagina and the *edge of the scalpel should be carefully turned inwards towards the myomatous*

uterus so as to assure the safety of the bladder and ureters, and *avoid wounding the uterine arteries low down*. If this precaution is taken a considerable length of the uterine arteries on either side may be found uninjured in the cellular tissue forming the raw surface of the reflected peritoneal sheath, where they may be dissected out and tied in a surgeon-like manner. When this is accomplished all the known supply of blood to the growth is effectually controlled.

VI. Ligature the ovarian pedicles, and snip off the ovaries. Take a good grip of the reflected peritoneal sheath on either side, with a strong pedicle forceps (fig. 3, A A).

FIG. 4.

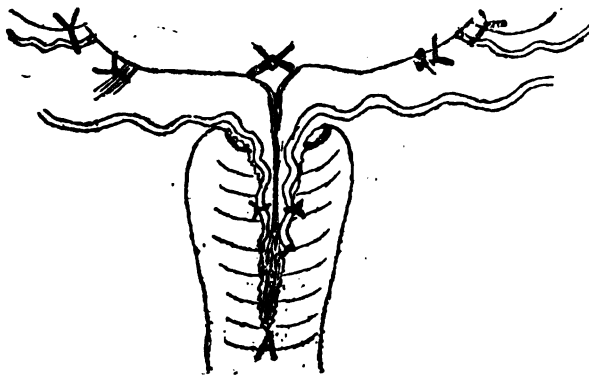


Fig. 4.—Vertical section showing rubber tourniquet removed. A, Peritoneal sheath invaginated into vagina and sewn in position.

VII. Loosen the rubber tourniquet slowly, so as to find out any bleeding points that may have escaped detection.

VIII. When all bleeding is completely controlled, invaginate the reflected peritoneal sheath within itself to the extent of three, four, or five inches, the amount depending on the size of the sheath, and sew it up with a continuous suture—much in the same way as Professor Senn closes a transverse section of the bowel previous to establishing intestinal anastomosis with decalcified plates (fig. 4, A).

The many obvious advantages of the above method of operating may be summed up as follows:—

I. "The stump," that terrible "gynæcological bogey" of myomectomists, is banished.

II. From first to last the "operative technique" is in complete conformity with the fundamental principles which apply with equal force to every region of the body.

III. It must in a great measure tend to eliminate all the causes of death from this operation:—

(a) Shock.

(b) Hæmorrhage.

(c) Injury to bladder and uterus.

(d) Pyæmia and septicæmia.

The shock must be materially lessened by the almost complete preservation of the peritoneum and sub-peritoneal cellular tissue, with its network of vessels. A somewhat parallel operation may be found in general surgery:—Furneaux Jordan's method of removing a sarcomatous or necrosed femur at the hip joint—Circular amputation of the soft parts above the knee; complete enucleation of the femur right up to the acetabulum. The preservation of the soft parts of the thigh, with its vast network of vessels and nerves, banishes most of the shock and great danger of this operation. Let us treat the myomatous uterus as the diseased or sarcomatous bone, and the peritoneum, with its sub-peritoneal cellular tissue, and vast network of vessels, as the soft parts, and proceed to amputate, or *completely* excise it in a similar manner.

In some of the cases recorded by Spiegelberg, Schoeder, Martin, Hegar, Billroth, and Keith, large portions of the parietal peritoneum were torn away, leaving the intestines in contact with the naked muscles. Unnecessary peritoneal mutilations of this kind must increase the primary shock, and multiply the subsequent risks of the operation.

II. No danger from primary, intermediate, or secondary hæmorrhage, as the dilated, thin-walled, friable vessels are not crushed by clamps and wire ecraseurs, but are all tied *imme-*

diately, instead of being compressed *mediately*. The uterine arteries are cut so long in the peritoneal sheath that they cannot retract out of sight, to bleed in the dark recesses of the true pelvis, but can be easily seen and dissected out from the raw surface of the dragged up peritoneal sheath, and tied in a surgeonly fashion.

III. The *complete* excision of the contractile lowly organised myomatous-uterus removes the *entire cause* of sloughing necrosis of the stump so often followed by pus formation-pyæmia and septicæmia.

Six years ago Dr. Maunsell successfully removed in the Dunedin Hospital a uterine myoma weighing 18 lbs. 4 ozs. In reporting the case before the Otago Branch of the New Zealand Medical Association, he made the following remarks :—

“ Although this operation has been successful, there is one part of it of which I am thoroughly ashamed, and that is the unsurgical method of dealing with the pedicle. If I had never read any book, periodical or pamphlet on the subject, I would have treated the stump on the broad principles of modern surgery, which applies with equal force to all parts of the body.”

Dr. Maunsell wished to know why the surgery of the myomatous uterus was so essentially different from that of all other diseased conditions that gynæcologists continued unquestioned to ignore all the fundamental principles of modern surgery.

Although Mr. Tait and Dr. Bantock strongly advocated the continued use of the wire ecraseur, he disliked that instrument, as it smelt of the surgical amateur. He thought it should be placed in the same category as the “ Spanish windlass ” or improvised tourniquet used by amateur members of ambulance corps for the temporary control of hæmorrhage until the arrival of a qualified surgeon. In conclusion, he was of opinion that extra-peritoneal myomectomy should be at once and for ever abandoned, as it was a disgrace to the surgery of the latter end of the nineteenth century, and all

forms of uterine clamps, pedicle skewers and wire *écraseurs* should be forwarded without delay to a museum for antiquated and barbarous surgical instruments.

Dr. LEITH NAPIER thought the Society must feel indebted to Dr. Heywood Smith for having brought forward this paper. Without trying, and often re-trying, unusual methods it would indeed be difficult to advance any operation. Leading gynæcologists, who had attained great success, might feel content with their personal achievements, but wider questions arose when the interests of the general body of operators and patients fell to be considered. Suppose great operators reduce their hysterectomy mortality to one in seven, were we to rest satisfied with even that? Were we not to consider the extra-peritoneal method as applicable to the majority of cases? Did we hold this view meantime, only because we did not yet know enough about the proper methods of managing the intra-peritoneal? All over the mortality of hysterectomy treated extra-peritoneally was little short of 30 per cent. Now might not the perfection of the other method improve this awful death rate? Perhaps some of the Fellows would sympathise with the illustrative thought, that, though the great Hebrew leader guided the footsteps of the children of Israel for forty years, and led them to the land of promise, he himself was only permitted to gaze on the promised place, not to enter therein. Dr. Leith Napier then referred to other operators whose writings deserved attention, notably Brennecke, Richelot, Pozzi, Kocher. He discussed the details of the intra-peritoneal method. He agreed with Dr. Bantock in preferring iodine to matico on account of its being both an antiseptic and styptic. Application of pure carbolic acid to the cervical canal had been carried out by some operators and was likely to be useful. Very careful preparation of ligatures was manifestly an essential. Sterilised silk would, from his experience in a few analogous operations, be found best. Dr. Napier then exhibited a multiple fibro-myomatous growth partly fibro-cystic and containing the upper third of the uterus which he had recently removed; in this case the pedicle was

treated extra-peritoneally. Personally, he had not as yet used the intra-peritoneal method, but if a suitable case presented, he felt inclined to do so.

Dr. INGLIS PARSONS said that Mr. Lawson Tait was mistaken in thinking that Apostoli's treatment caused adhesions. In one of Dr. Parsons' cases, Dr. Travers had performed hysterectomy after thirty applications of electricity and there were no adhesions whatever; the patient made a rapid recovery. The operation was performed on account of the size of the tumour. The patient being single always looked like a pregnant woman. The electricity took away her pains, and stopped the profuse loss, and slightly reduced the size of the tumour. If adhesions ever occurred after Apostoli's treatment they were due to want of antiseptic precautions leading to pelvic peritonitis. In the case quoted by Mr. Tait, he could not prove that the adhesions were not present before electricity was applied. If cases of hysterectomy died after Apostoli's treatment the fault lay with the operation and the operator, not the electrical treatment.

Mr. DUNNETT SPANTON, referring to the importance of the subject dealt with in the paper, expressed his regret that he had not had the pleasure of being present when it was read. Fortunately a good abstract appeared in *The Lancet*, and this was a matter for congratulation on the part of the Society. Dr. Heywood Smith seemed to have dealt with the subject in a clear and ingenious manner, and although suppuration had occurred in each of the cases related—so that the method could by no means be considered perfect—still it was an effort in the direction so often indicated by the authorities of very large experience, such as Mr. Tait and Dr. Bantock—who would no doubt welcome any genuine attempt to overcome the difficulty, and give it a fair trial on its merits. Of course any surgeon who could show such a beautiful and valuable series of illustrative specimens as those of Dr. Bantock must speak with authority on this question, and although Dr. Bantock's and others' views were in favour so far of the use of the clamp in some form yet it was quite clear that with all the advantages claimed for the clamp, something better must be devised before

hysterectomy can be made an operation of comparative safety. Mr. Spanton's own experience was of that limited kind referred to by Dr. Bantock, but dated back to 1879, when he did what he believed to be the first Freund's operation for total extirpation of the uterus in this country, and which had some features similar to the plan advocated by Dr. Heywood Smith. Yet it had not found favour with Sir Spencer Wells and other leading operators. Mr. Spanton referred also to a case in which after total extirpation the broad ligaments and uterine arteries were ligatured and the peritoneal floor closed over them with a good result. He considered the method of Dr. H. Smith open to grave danger if the stump of the uterus were closed by ligature, especially silk, unless some other outlet for escape of blood or pus were provided. Silk had often proved false in hernia and other operations where large ligatures were needed, and he was inclined to think properly softened chromic catgut preferable. He hoped that with some modification the extra-peritoneal method described might have a fair and impartial trial, and concluded by moving a vote of thanks to Dr. Heywood Smith for his paper.

Dr. HEYWOOD SMITH, in rising to reply, thanked the Chairman for so kindly proposing a vote of thanks to him, and said he would answer the various criticisms rather in the order of subjects than of speakers. With regard to what was said by Mr. Greig Smith and Mr. Lawson Tait at the last meeting as to his having brought forward only a few cases, he said it was absurd to make that an objection, as in the beginnings of all investigations it was impossible to bring forward many cases, and, in fact, he had quoted a good many cases of various operators, which all tended to show not only that the operation was perfectly feasible, but that there had been a very fair amount of success recorded. With regard to what had been said about the suppuration in the cervical stump and the closure of the cervical canal, that was one of the very questions that he had himself propounded for discussion. There was no doubt that it was better to leave the

cervical canal open, because, if suppuration did happen, there was at once a ready exit for it. Moreover, it was well known that the wound in the peritoneum healed perfectly in forty-eight hours, and, as suppuration did not take place till the third or fourth day, there was no danger of the pus bursting up into the peritoneal cavity. He was, therefore, of opinion that the cervical canal should not be closed. Dr. Bantock, in speaking of his cases, had sometimes confused between intra-peritoneal and sub-peritoneal or what might be termed infra-peritoneal. This was illustrated by what he said about the stump in ovariectomy. In ovariectomy the stump, though dropped into the pelvis, was yet in the cavity of the peritoneum, whereas in sub-peritoneal hysterectomy the end of the stump was wholly outside that cavity. Then, again, the reason why Dr. Bantock so greatly feared bleeding was because in his operation he did not tie the uterine arteries; whereas Dr. Heywood Smith contended that if all the bleeding points were properly secured the risk of hæmorrhage was reduced to a minimum. Mr. Bowreman Jessett had brought forward the question of total extirpation of the uterus in these cases, but he (Dr. Smith) considered that method exposed the patient to more risk than leaving the cervix as a stump. He did not agree with Dr. Leith Napier that iodine was as good a styptic as tincture of matico which he had found very efficacious. Dr. Inglis Parsons had referred to the risk of wounding the ureters, but as the division of the peritoneum was made some distance up the cervix, there was but little danger of their getting wounded. With regard to what the chairman (Dr. Spanton) had said about a silk ligature which he (Dr. Smith) had placed, in one of his cases, round the cervix inside the peritoneum, and which had been thrown off by suppuration, he considered it useless, as if all the bleeding points were secured there was no need of a ligature round the cervix. In a case of ovariectomy that he had performed at the Hospital for Women in 1884 it was twenty-one and a half months before the ligature came away; and it was a curious circumstance that he had recently

operated upon the same woman for an ovarian tumour of the other side and he believed that the same thing was going to take place. He begged to thank the Society for the patient hearing they had given him. He did not wish to dogmatize on the subject, nor to say that the best method of operating on these cases had yet been found, but if this paper should be the means of drawing attention to this important subject, and of leading others to still further make improvements in this operation he should be amply rewarded.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MARCH 10, 1892.

FANCOURT BARNES, M.D., VICE-PRESIDENT, IN THE CHAIR.

PRESENT : 25 Fellows and 3 Visitors.

Mr. James Cooper was proposed for election.

Drs. William Travers and F. F. Schacht were elected Fellows of the Society.

A Case of Ruptured Uterus. By W. J. SMYLY, M.D., Master of the Rotunda Hospital, Dublin.

The patient from whom this specimen was obtained was a married woman, aged 27, and this was her fourth pregnancy. For some time she had suffered from complete prolapse of the uterus. She was admitted to the Rotunda Hospital on the 1st of last October, and I saw her shortly before midnight. The abdomen was pendulous ; the head could be easily felt, freely movable above the pelvic brim, and presenting in the second position. The foetal heart was strong and regular, and labour had not commenced. The cervix protruded about an inch beyond the vulva, and the mucous membrane covering it was tough and dry, resembling skin. At 2 a.m. she was seen by my senior assistant, Dr. Flynn, who found that labour was commencing, the patient having had two or three labour pains. From this time labour proceeded naturally, until 7 a.m., the pains, however, being rather feeble, and the intervals long. At that time she suddenly became collapsed, and Dr. Flynn was sent for, who immediately summoned me. I found the patient pale and collapsed, with cold sweat on the forehead ; eyes sunken, with dark rims around them, pulse rapid, thready, almost imperceptible. The contraction ring

was at the umbilicus, no foetal heart heard, cervix inside vulva, os half dilated, no blood escaping externally, no recession of presenting part. The head was immediately perforated, and the child extracted with the cranioclast. Profuse flooding followed the diminution of the head and extraction of the body. The patient died about two minutes after delivery. Upon introducing the hand, a large rent was discovered in the lower uterine segment on the left side, through which the hand could be easily passed into the peritoneal cavity.

The specimen removed from the body shows some points of interest, both to the obstetrician and the gynæcologist. The lower uterine segment is seen to be much thinned out and elongated to the extent of about four inches. From the position of the os internum, estimated by the character of the mucous membrane and reflection of the peritoneum, the cervix does not appear to participate to any great extent in this elongation. Now, this thinning out of the lower uterine segment could hardly have resulted from uterine contraction, because the woman was barely five hours in labour, and that altogether in the first stage, nor were the pains of even average severity. I am rather inclined to think that it was the result of the long standing prolapse, and I should not be surprised if it be discovered that in cases of so-called supra-vaginal hypertrophy of the cervix accompanying prolapse, the lower uterine segment be found frequently to participate. To the obstetric practitioner these cases offer many points of interest, and their management must always be a matter of anxiety, but I shall not enter into that matter at present.

Dr. GODSON asked if the patient had a pendulous abdomen at the time of labour? This condition was a frequent cause of rupture of the uterus. He mentioned the case of a patient to whom he was called, who, after a long period of great suffering, pains rapidly succeeding one another without the head of the foetus descending, experienced sudden relief during the night in the absence of the medical attendant, who, in the morning, found the presenting part had disappeared. When Dr. Godson arrived he found a rent in the uterine wall

at its junction with the vagina posteriorly, through which the foetus and placenta had passed into the abdominal cavity. He at once procured the assistance of Dr. Bantock, who opened the abdomen, removed the foetus and placenta, and stitched up the uterine rent. The patient, however, did not rally from the long labour and shock she had sustained, but died within twenty-four hours. In this case there was an extremely pendulous abdomen, and no attempt had been made to rectify it.

Three Cases of Total Extirpation of the Uterus for Myoma.

By W. J. SMYLY, M.D., Master of the Rotunda Hospital.

In bringing forward these cases this evening, I feel somewhat at a disadvantage, because, having already devoted two evenings to the discussion of hysterectomy for myoma, you must, I fear, be somewhat weary of the subject, and as I have not had an opportunity of learning the views expressed on those occasions, I am liable to repeat a twice-told tale. However, on the other hand, because all must now be familiar with the various points still in dispute, I am saved the necessity of an elaborate introduction, and can confine my observations within the narrowest bounds.

In order, however, to prevent misconception I must briefly state what is my own position with regard to this burning question. With the exception of the three cases which I have now to bring before you, I have always performed a supra-vaginal amputation of the uterus, with extra-peritoneal fixation of the stump. I have adopted this method solely and entirely because of the larger mortality entailed by returning the pedicle into the abdominal cavity. Some operators, no doubt, have had excellent results with the intra-peritoneal method, but their success has appeared to me to have been due rather to individual dexterity than to improved methods of operation. This is especially the case with regard to Brennecke, who has published eighteen cases without a death;¹

¹ *Zeits. f. Geburtsh.*, vol. 21.

but in reporting these cases he is most careful to warn his readers not to depart in the smallest particular from the rules laid down by Shroeder. The latter, however, had a mortality of 30 per cent., and if one were to follow his precepts exactly, why should the results be better? On the contrary, in less experienced hands one would expect them to be worse. With regard to Zweifel's cases, recently published,² fifty-three cases, with four deaths, two of which could in no way be attributed to the method of dealing with the stump, the case is different, because he advances a new and simpler method of dealing with the pedicle, and if this mortality prove to be the normal result of his method, then we shall be bound to give up all others in favour of it.

However, we have not arrived at that point yet, and so long as the average mortality from the intra-peritoneal method stands at 24 per cent., whilst that from the extra-peritoneal is only 14 per cent., I feel bound in spite of all other considerations to give the preference to the latter. The same would, of course, apply to total extirpation should it yield a high death-rate, but of this we are at present in ignorance. The operation is a novel one, and excepting Dr. Martin, of Berlin, no one has had much experience of it. But I can see no reason why it should prove a fatal proceeding. In the intra-peritoneal method a number of circumstances combine to increase the death-rate. The prolonged operation resulting from technical difficulties and the number of sutures to be inserted involving long exposure of the peritoneum and intestines, but above all the nature of the stump itself; the tough yet brittle nature of its tissue, the inequality of its walls, rendering exact adaptation difficult and sometimes impossible; its copious vascular supply rendering hæmorrhage probable, unless it be half strangled by a multitude of sutures and ligatures; the large mucous canal which it contains by no means always aseptic, which must be either cut out or cauterised; the exudation of bloody serum and subsequent

² *Archiv. f. Gynak.*, bd. 41.

shrinkage render the stump a source of danger and trouble both immediate and remote. Cases in which leucorrhœal and purulent discharge, accompanied by escape of sutures, opening up of the stump with adhesion of the intestines and fæcal fistulæ are more and more frequently heard of, so that the rapid convalescence for which we are asked to incur an increased risk of 10 per cent. is by no means a certainty, nor should it be forgotten that it was because of these subsequent inconveniences rather than the greater mortality that Dr. Martin gave up the intra-peritoneal treatment of the stump in favour of complete extirpation of the uterus.

Most of what I have said is more a plea for the extra-peritoneal treatment of the pedicle than for the total extirpation of the uterus, and I am still in favour of that method in a large proportion of cases, where, for example, the patient is in such a reduced condition that a rapid termination of the operation is a vital indication ; or where the mechanical difficulties render total extirpation more hazardous, I should amputate the uterus and treat the stump extra-peritoneally, but in other cases, and especially in small tumours, in very fat patients, and when the pedicle is short I think the patient should be saved the pain, the prolonged convalescence, and the risk of hernia inseparable from that proceeding.

In the first case in which I resorted to complete extirpation the operation was not one of election but of necessity. The patient had been for some years under the care of my predecessor, Dr. Macan, suffering from myoma of the uterus, attended by pain and hæmorrhage ; the latter had been controlled by repeated curettings. After each curetting she was relieved for some time, but the bleeding subsequently returned and the operation had to be repeated. After one of these curettings she had a septic attack with pelvic peritonitis. She first came under my care in June last, and was admitted to the Rotunda Hospital. She was a large fat woman, aged 44, married, but had never been pregnant. She complained of much pain and tenderness in the lower part of the abdomen, of copious muco-purulent discharge and

frequent hæmorrhages. Upon examination I found the uterus enlarged, reaching nearly to the umbilicus, the cervix drawn up and the os patulous; within the latter I felt a soft substance, which broke down easily under the finger. A portion of this I removed with the curette and had it examined by our pathologist, Dr. Earle, who declared it to be malignant adenoma of the mucous membrane.

On the 12th of June I removed the uterus. On opening the abdomen I encountered the results of the previous peritonitis. The separation of the old adhesions, especially those which bound down and imbedded the tubes and ovaries was by far the most difficult part of the operation. Douglas's pouch was obliterated, but I gradually separated the agglutinated surfaces and inserted a sponge into the bottom of it. Having ligatured and divided the broad ligaments in the usual way, I temporarily closed the abdominal opening with bullet forceps and proceeded to free the cervix per vaginam; having separated the bladder in front I completed the incision around the cervix, and I easily laid open the posterior *cul-de-sac* by cutting down upon the sponge previously introduced into the pouch of Douglas. The bases of the broad ligaments were secured with silk sutures and divided. The abdominal wound was then re-opened and the uterus drawn out. It was finally closed in the ordinary way and the patient put to bed. She rallied well from the operation and made an afebrile recovery.

The ease with which the operation was performed in this case, the freedom from pain, and the rapid convalescence, made such an impression upon me, that I determined upon the next favourable opportunity to adopt it as the method of election.

On the 8th of December, Mrs. E., aged 35, was admitted to the Rotunda Hospital. She had been married seventeen years and had seven children, the last three and a-half years before admission. Since the birth of her last child she had noticed an abdominal tumour which had latterly grown very rapidly. She also complained of pain and hæmorrhage. On

examination a large soft myoma was found occupying the fundus of the uterus, which was also enlarged, the sound entering $5\frac{1}{2}$ inches. The indications for operation were the rapid growth of the tumour and the pain and hæmorrhage, which incapacitated her for work.

The abdomen was opened on December 17th, the broad ligaments secured and divided in the usual manner, and a provisional clamp placed around the cervix; the peritoneum was divided by a circular incision and stripped off the cervix, the bladder being separated as far as the rope of the clamp would permit, an elastic ligature placed around the cervix inside the peritoneum, the uterus cut off and the cervical canal having been thoroughly cauterised, the provisional clamp was taken off, the stump dropped in and the abdominal wound temporarily closed. The cervix was then freed per vaginam, the bases of the broad ligaments secured with clamps and divided, the cervix was removed, and the pelvis having been flushed out the abdominal wound was finally closed. This patient also made a good recovery and was up in three weeks; but on the 1st of February, six weeks after the operation, and the day before she was to have returned home, she remained out very late. The day was bitterly cold and she was poorly clad, she returned very chilly and soon developed a broncho-pneumonia, with which she has been confined to bed ever since.

My last case was a Mrs. G., aged 33, married ten years; one child nine years ago; since then sterile; was admitted to the hospital on July 20th, suffering from menorrhagia of five years' duration; the discharge was very profuse and lasted nine days. She had multinodular myomata of the uterus, which reached nearly to the umbilicus. I removed both tubes and ovaries and she was discharged in three weeks. After this, although the uterus became somewhat smaller, the hæmorrhage increased and was almost incessant. I then dilated the cervix and discovered a small polypus attached to the fundus. Having removed this, I hoped for a cure, but in this I was disappointed. The hæmorrhages continued so

profusely and so frequently that it at last became evident that unless they could be stopped she could not long survive, and I determined to remove the uterus.

On the 3rd of February in this year, I re-opened the abdominal wound. The intestines were found adherent to the cornua of the uterus, from which the tubes had been removed and separated with a little difficulty, and the broad ligaments secured and divided. The rest of the operation was similar to a vaginal hysterectomy, excepting that the uterus, when completely separated from its attachments, was removed through the abdominal wound. A strip of iodoform gauze was passed up through the vagina into Douglas's pouch with a pair of forceps to act as a drain, and the abdominal wound closed. This should have completed the operation, but for a mistake which might have proved fatal, especially in the patient's exsanguine condition. I mistook the forceps with which I had introduced the gauze into Douglas's pouch, for the clamp which secured the left broad ligament, and unfortunately removed the latter. A violent hæmorrhage resulted. I immediately removed the dressings, re-opened the wound, and the patient being on Trendelenburg's table, the uterine artery was easily discovered spouting freely and secured with clamp forceps. This completely controlled the bleeding, and as I found some difficulty in applying a ligature, I left the forceps protruding through the abdominal wound, and removed them with the other clamp after forty hours. This patient also made a good recovery, and is now up and about.

In conclusion, I do not wish to draw general conclusions from three cases, but from what I have read and seen I believe that it is better to remove the cervix entirely than to return it into the abdomen where it is liable to prove a source of danger, and, if only the mortality be not greater, it is in many ways superior to the extra-peritoneal fixation of the stump; only I would caution those who undertake this method to familiarize themselves with its technicalities by previous practice, either upon the dead subject, or in the vaginal extirpation of cancerous uteri.

Mr. REEVES felt that Dr. Smyly's paper was a very valuable contribution to the Transactions of the Society, and he was deeply interested in it because the mode of operation adopted was that suggested by him in the *British Medical Journal* several years ago, viz., the complete or abdomino-vaginal extirpation of the uterus. Dr. Smyly was also to be congratulated on the frank manner in which he had related some surgical *contretemps*, and this should be of service to other operators. The paper was a complete pendant to that of Dr. Heywood Smith, whose cases were operated on by the intra- or subperitoneal treatment of the stump, and as all the cases recovered, this pleasing fact, taken in conjunction with the rapidly increasing success of these plans abroad, should make us abandon all prejudices and cease to bow to authority in a matter so important and progressive. We must remember how high the mortality of extra-peritoneal hysterectomy had been in all hands, and that only recently had it been reduced, whereas the all-round mortality of these operations, though much younger, was more favourable. Some denied this, but if the cases that had been treated intra-peritoneally were properly classified, according to the plan or modification adopted, and not all jumbled together—such as myomectomies with hysterectomies—this statement would be found correct. Certainly, so far as it had gone, the plan of separate ligation of the uterine arteries before amputating the uterine body had been very successful, and if Dr. Smyly could show three cases of total abdomino-vaginal excision, all successful, there was no reason why, in equally experienced hands, this good record should not be added to. He quite concurred with Dr. Smyly's caution that no one should undertake these operations until he had had experience in vaginal hysterectomy.

Dr. HEYWOOD SMITH said that in spite of the able way in which Dr. Smyly had advocated the total extirpation of the uterus in cases of myomata, yet he ventured to consider the leaving of the cervix as a stump the less risky operation; there was less risk of wounding the ureters, and the operation

took less time. He remarked in the specimen which Dr. Smyly had exhibited, that the ovaries were absent; he would like to ask whether Dr. Smyly clamped the broad ligaments close to the uterus, or whether he removed the ovaries separately? It was absurd for Dr. Bantock to say that his (Dr. Smith's) cases only recovered "by the skin of their teeth," and that they ran the risk of suppuration and of pus escaping into the cavity of the peritoneum, whereas it was well known that the wound in the peritoneum healed in about forty-eight hours, and suppuration, if it took place at all, did not occur for three or four days.

Note on the alleged Occurrence of "Tubal Abortion" in Ectopic Gestations. By LAWSON TAIT, F.R.C.S.Eng. and CHRISTOPHER MARTIN, M.B.Ed.

A very interesting series of cases was published last year by Dr. Geo. M. Tuttle, of New York, in vol. xvii. of the *American Gynæcological Transactions*. One of the cases is described as one of "tubal abortion," and the specimen is described as "beautiful and almost unique, the tube being much dilated in its outer half, and with very thick walls. It was not ruptured, but from the open end of the tube, and still partly attached, was protruding a small placenta, and hanging from this by its unbroken cord a foetus about $2\frac{1}{2}$ inches long."

The assumption that the tube was not ruptured to permit the escape of the ovum is gratuitous, and that no rupture took place is extremely unlikely. What doubtless took place soon after the adhesion of the ovum near the ampulla of the tube is that the fimbriæ closed over it and became adherent to one another, as they may be constantly seen to have done in cases of non-adherent hydrosalpinx, and as I have actually seen in many cases of tubal pregnancy near the outer end of the tube. The subsequent dissection of the fimbriæ would constitute a rupture in every sense as complete as if the wall of the tube had given way one-eighth of an inch within the ostium.

The history of the case, as given by Dr. Tuttle, shows not one point in which the history or symptoms differed in any way from those generally seen in ordinary tubal rupture. That the remains of the ovum should be found hanging out of a ruptured ostium, instead of from a hole altogether new, constitutes no justification for the introduction of a piece of new nomenclature, which is misleading, incorrect and suggestive of a serious possible danger.

The phrase, "tubal abortion," is quoted by Tuttle from Bland Sutton, and by the latter from Keller (*Zeitschrift für Geburtshilfe*, 1890), and the following sentences show upon what a feeble basis this objectionable invention rests. This constitutes the whole reference to it in Keller's diffuse and uninteresting paper:—

"Im vorliegenden Präparate handelt es sich um einen sogen-Tubarabort. Die Reflexa ist an ihrem distalen Ende geplatzt und das Ei zum Theil durch diese Oeffnung geschlupft. Und zwar scheint das Amnion mit seinem Inhalt schon ausgetreten zu sein; wenigstens vermochte man mikroskopisch nichts von ihm nachzuweisen. Die Hohle der Reflexa enthält Blut mit Chorionzotten; ebenso ist die Zusammensetzung des Blutcoagulums unterhalb des Reflexasackes." (Carl Keller, *Zur Diagnose der Tubengravidität. Zeitschrift für Geburtshilfe und Gynäkologie*, 1890, pp. 21, 22.)

"Als einzige Stütze dieser Diagnose bleibt uns der Befund von Deciduazellen nur bei erfolgtem Tubarabort, d. h. wenn das Ei schon die Tube durch das Ost. abdomin. verlassen hat." (*Ibid*, p. 23.)

Upon this slender foundation Bland Sutton builds up a chapter on tubal abortion which contains a number of statements which, to me, are simply astonishing. He points out what is a fact, that the presence of an impregnated ovum in the outer third of a Fallopian tube leads to occlusion of the abdominal ostium. He asserts that this event is commonly complete by the end of the sixth week, though sometimes it is delayed to the eighth week; but it may very well be asked

where are the specimens of unruptured pregnant tubes by which these strange conclusions are established?

So long, he continues, as this orifice remains open, the ovum is in constant jeopardy of being extruded through it into the peritoneal cavity, and the nearer it is situated to the ostium the greater is the chance of its being thus discharged from the tube. To this accident, he says, the term "tubal abortion" may be applied, for it is exactly parallel to those early abortions occurring in connection with uterine gestation before the end of the second month, and it further resembles them in the fact that the ovum is apoplectic.

From my own point of view I cannot see any resemblance between the process of an ovum after fertilisation finding its way back over the road it came, into the peritoneum where it has no business to be, and another fertilised ovum proceeding onwards by the usual road towards its inevitable destination. The point is too ludicrous to discuss, and had it not a clear element of danger in practice I should not have troubled to mention it.

Proceeding, Mr. Bland Sutton speaks of "many of these cases," and proceeds to discuss divisions and varieties as if they occurred in hundreds. Mr. Sutton gives one case which is clearly an instance of the rupture of a closed ostium, as also most probably was that of Dr. Tuttle. I have come across no other cases throughout the literature of the subject. I have now operated on sixty-three cases of tubal gestation soon after the time of rupture. I have seen over twenty *post-mortem* examinations, and one way and another I must have examined more than a hundred other specimens, and I am sure out of this number of nearly two hundred examples I never saw a single instance where the hæmorrhage had passed through the abdominal ostium.

On the page following that on which are the words I have already quoted, Mr. Bland Sutton goes on to say: "Many of these cases are overlooked. A glaring example of intellectual blindness in this direction is furnished by Goupil in his 'Clinical Memoirs on the Diseases of Women,'

p. 235." But on looking at the reference it is clear that the only thing in doubt really is as to whether the case was one of tubal pregnancy at all.

Mr. Bland Sutton further tells us that these cases of tubal abortion are sometimes described by the meaningless term—*hæmato-salpinx*. But this is not a meaningless term. It clearly and accurately conveys the definition of an occluded tube filled by the *débris* of altered blood. Long ago, I showed that probably very many of these cases had their origin in Fallopian pregnancies which died before the period of rupture, and, consequently, the sac of the closed tube remained intact. I proved this for many of them, and showed the chorionic structures left embedded in the muscular structures of the tube, more than twelve years ago. But it is hardly seven years since I have succeeded in convincing my brethren outside my immediate surroundings that there is such a disease as *hæmato-salpinx*, and had it not been for the famous Liverpool trial, I doubt if they would have believed in it yet. It is therefore amusing to me to see Keller discovering "*Chorionzotten*" in 1890 with all the satisfaction of an original explorer, and still more to see Bland Sutton misunderstanding Keller. *Hæmato-salpinx* is not a meaningless term, because it has attached to it no theory as to the origin of the blood-contents of the cyst, and it is certain that though the tubal pregnancy origin accounts for many of these cases, it does not account for all.

The arguments against the introduction of this fresh phrase of "tubal abortion" are these:—

1. It is wholly unnecessary, for the cases must be extremely rare, and if even they were common they can present neither clinical nor pathological features by which they could be classed apart from cases of tubal rupture; nor do the surgical necessities of the two conditions differ in any way.

2. There is a positive danger in the introduction of a term so familiar as that of "abortion," associated as it is with an everyday occurrence of a well and popularly recognised nature, to be used in connection with a catastrophe so dire

...

as that of intra-peritoneal hæmorrhage arising from tubal pregnancy. If the name should become established, the inevitable result will be that an idea of two conditions will be fostered in the minds of practitioners who are not specialists, one of which—a mere “abortion”—is of no moment, while the other is a rupture and serious. Then we shall be told when we are called to cases, that “I wanted to see whether it wasn’t merely a tubal abortion or not,” and he would wait too long.

Dr. HEYWOOD SMITH exhibited the appendages removed from a very interesting case, that day week. The patient, aged 26, had been married eighteen months, and had evidently been infected with gonorrhœa by her husband. She had been sent to him by Mr. Marsh, suffering from a large pyosalpinx. As she began to menstruate the day she came into Warrington Lodge he was not able to examine her on her admission, but a day or two afterwards, on examining the abdomen, he felt a large tense tumour on the left side of the median line. When the period was over, the tumour had disappeared, and on inquiring of the nurse he was told that during the whole period large quantities of pus had passed, so that evidently the tumour had evacuated itself through the uterine end of the oviduct. The operation proved a very difficult one. There were extensive adhesions ; there was a small parovarian cyst that came away on the right side, and the right oviduct was thickened ; on the left, it was at first extremely difficult to make out the parts, but after carefully breaking down the adhesions the ovary and oviduct were removed. On examination, after the operation, both oviducts were found sealed at their distal ends, and on the left oviduct being slit up, it was found to be lined throughout with pyogenic membrane. He considered that, although cases of hydrosalpinx not unfrequently emptied themselves *per uterum*, yet such an occurrence was comparatively rare in cases of pyosalpinx. There was considerable hæmorrhage from the torn adhesions, but he put in a drainage tube, which was removed on the third day, and the patient was now doing perfectly well.

The Society then adjourned.

ORIGINAL COMMUNICATION.

*Synopsis of a Paper entitled, " Abdominal Section in a Case of Cyst of the Mesentery, with Remarks."*¹ By Dr. J. A. GOGGANS, of Alexander City, Ala.

He said that he had been induced to write a paper on this case from the fact that cysts of the mesentery are extremely rare, and that operations for their removal were most generally fatal. He said that he had been able to find the record of one case of cyst of the mesentery removed by enucleation, by Guyon. The patient died on the seventh day after the operation. One case was operated upon by Sir Spencer Wells. He incised and drained the cyst, but the patient died within a few weeks. Three cases were operated upon by Pean, only one of which recovered. One case was operated upon by Watts, but he did not know the results in that case. One case was operated upon by Carter, who incised and drained the cyst, but the patient died from septicæmia and bleeding. One case was operated upon by Bantock,² who removed the cyst by enucleation, and the patient recovered. The conclusion arrived at as to the origin of the cyst, both by Dr. Bantock and the pathologist who examined it, was that it originated from some foetal structure, possibly some of the rudiments of the permanent kidney.

Mr. Greig Smith² says that he knows of two cases of cysts of the mesentery operated upon by his friends, but that they have not yet been published, and that he could not relate them.

¹ Read before the Southern Surgical and Gynæcological Association in Richmond, U.S.A.

² Personal communication and *Lancet*, 1887.



Dr. Goggans said that the patient upon whom he had operated was a young woman twenty-one years of age, daughter of a physician, of Columbus, Ga. She had not been well for about two years, but did not notice that her abdomen was becoming larger until about three months before the operation. During those three months, she had suffered much uneasiness and pains in the abdomen, and at the time of the operation had a pulse of 120, and temperature 100° Fah. The cyst was quite large, occupied mostly the left side of the abdomen, extended from under the ribs into the left lumbar region, dipped downwards into the pelvis and extended three or four inches beyond the median line of the abdomen into the right side. Dr. Goggans first removed some of the fluid by aspiration on February 7th, 1891. The fluid was thin and of a dark colour and contained albumen, phosphates and chlorides. The patient was not benefited by the operation, and the abdominal section for the removal of the cyst was made on February 24, 1891. The cyst was covered by omentum and mesentery, and loops of intestine were imbedded in its walls. The idea of its enucleation was soon abandoned ; a point as remote as possible, from blood vessels and intestine was selected and the cyst incised and drained. More than a gallon of thin dark fluid was evacuated, the sac irrigated with hot water, the lips of the incised sac stitched to the upper angle of the abdominal incision, and glass drainage tube introduced to the bottom of the sac. The abdominal incision was then closed with silkworm gut sutures. The time consumed in performing the operation was about twenty-five minutes. The sac was irrigated every three or four hours and the drainage tube gradually withdrawn. The patient suffered very much from nausea and vomiting for five days after the operation, which he attributed much to the intimate connection between the sac and the intestine, but made a perfect recovery within thirty days.

REVIEWS, &c.

The *Annals of Gynæcology and Pædiatry* (Philadelphia), for January, 1892, contains an interesting account by Dr. FANNY BERLIND, of a case of double uterus, with stenosis of the right cervix, and extreme dysmenorrhœa, in a girl of 16. There was a thick band connecting the two cervixes. The patient died after abdominal section, and good drawings are given of the malformation. Dr. J. H. EVANS describes a case in which menstruation occurred first at the age of 22, then was absent for four years, and then was seen six times in the following twelve months, with acute physical suffering. No uterus could be felt. Abdominal section showed that the tubes ended in a little cup-like depression at the roof of the vagina, inside which a small excessively mobile cervix had been felt. Both ovaries and tubes were removed, and the patient recovered quickly. Forty days after the operation the periods returned with all the former pain and discomfort, and for sixteen months she menstruated every twenty-eight days. In fact, she became more regular after the removal of the reproductive organs than she had ever been before. After this time, however, the loss became irregular, and has finally ceased for some months. Dr. ALICE MACLEAN ROSS states that in five years at the Women's Hospital, 197 primiparæ were confined, and that 35 per cent. of these suffered more or less laceration of the perinæum, the accident being more common in women between 16 and 20 than between 20 and 35 years old. Women who possess dark or red hair, red cheeks, red lips, and a bright, clear skin, are, in the experience of Dr. Alice Ross, most liable to tears of the perinæum, and also to suffer from cracked nipples. Blondes with a

sallow skin are, she says, the least vulnerable in both respects. This is a curious practical point, which might receive further confirmation or contradiction in this country.

Menstruation and Laryngeal Diseases. — Menstruation, according to Dr. CARL H. VON KLEIN, of Cleveland, shows its presence, nine times out of ten, in the low tone of voice. He says many of the most difficult cases with which the laryngologist has to deal are disturbances of the throat caused by disturbances of the ovaries. It is a common thing to meet with cases of acute inflammation of the tonsils, larynx, pharynx and fauces in females during their menstrual period. He has observed the voice in many professional singers during their menstrual period defective in gravity, force and timbre, producing in many cases a husky sound, as of a low masculine order. Prima donnas aim to avoid engagements during their expected period. In many cases of ovarian troubles, the laryngologist can accomplish little without the aid of the gynæcologist.

Fatty Degeneration of the Placenta. — Fatty degeneration of the placenta as a frequent cause of abortion, has long been recognised, and the chlorate of potash is well known as its most valuable remedy.

Shoemaker, in his recent edition of "Materia Medica, Pharmacology and Therapeutics," says it is found useful in deficient oxygenation of the blood, especially in placental inadequacy, in impoverishment of the blood, as in anæmia and chlorosis. In this latter condition, tincture of the chloride of iron in an effervescing solution, containing twenty-five grains of the chlorate of potash, is recommended three times daily, after meals. It has been shown that administered in fifteen-grain doses three times a day, it is serviceable in preventing diseases of the placenta, and thus enabling a woman who had previously miscarried several times to go on to the end of term.

The Bacteriological World (Michigan) for March, narrates the following peculiar case of malignant disease of the uterus:—

Mrs. F., age 52, had suffered from a pelvic disease for 1½ years previous to her introduction into the Sanitarium, December, 10th, 1891. Had a bloody discharge from the vagina, more or less constantly during the above period. She was suffering from hæmorrhoids, constipation, cold extremities, broken sleep, and various functional disturbances. The discharge followed the menopause, and continued to this date. She complained of pains in the left ovarian region over crest of ilium. The diagnosis arrived at, was malignant disease of uterus, probably extending into the broad ligament. Microscopical examination, so far as the tissue itself was concerned, indicated sarcoma, but it was not satisfactory. Throughout this diseased tissue there existed a filamentous growth (vegetable) to be described further, which gave to the case a decidedly peculiar character. On January 13th, 1892, the patient was placed on the operating table, when the cervix was found badly diseased. On the left it was almost entirely gone, and on the right some excrescences protruded and bulged into the vagina. The entire uterine wall seemed invaded. Some of the pathological tissue felt dense and at other parts it felt softer. Considerable infiltration seemed to involve the latter side of the os and uterus. In stretching the mouth open a large quantity of offensive pus was discharged. Dr. Kellogg excised the prominent growths and curetted all the diseased portions thoroughly. The pus and tissue, being gathered, were submitted to microscopical examination. The following is the report thereof:—

The pus presented no special interest which, from a purely microscopical standpoint, needs mention at this moment. Cultures under way may bring some interesting features, which, in such an event, will be reported later. The peculiarity of the case existed in the pathological tissue itself. Histologically, it had the character of a sarcoma, but throughout its structure, appeared ramifications of filaments which seemed to belong to the class of micro-organisms known as *cladothrix*. On making the sections, after freezing the tissue, those filaments, branching in various directions, presented the

appearance of mycelium penetrating between the cells of the tissue. They were quite loose, and on breaking up the fresh tissue could be separated and isolated from the section. Unstained, they were not distinguishable, but stained with hæmatoxylin they presented a dark appearance with bright spaces or spots (as if spores were present) at regular intervals.

Now the question arises, Was this vegetable growth a secondary complication, or was it the primary cause of the diseased tissue? It is possible that the pathological condition only afforded a proper field for the parasitic development. Yet it is not improbable that at the period of the menopause, these organisms began to develop somewhere about the uterus and gradually invaded its walls, thereby producing the condition explained. Perhaps further studies will clear the doubts, as the patient, after curetting, and painting the surfaces well with iodine, made a fair recovery. Should the disease reappear, the uterus will probably be excised, when further investigations will be instituted. Should the cure be complete, we will have a good indication as to the nature of the malignancy or benignancy of the case. If a true sarcoma, not due to this parasite, the case is likely beyond redemption. We shall hope to hear further particulars of this case.

The same Journal has an article on "Infectious Abortion in Cattle." As a matter of comparative pathology, further investigations on this subject may produce facts of the highest importance to gynæcologists. Infectious abortion, our contemporary states, has been known in live stock for a number of years. Investigations of this disease have been made in France among cattle and sheep by Prof. Nocard and others. The writer had an opportunity of investigating this malady somewhat cursorily in cattle in the State of Missouri. In Illinois, Dr. Williams, then of Bloomington, made an inquiry of infectious abortion in mares, for the United States Government. It seems pretty well understood by all these investigators, that the cause of this (like all other infectious maladies), is some form or other of micro-organism, or perhaps an association of micro-organisms under certain circumstances.

Dr. Williams made some tests by the introduction into the vagina of a portion of the placenta from fresh cases of abortion, and succeeded in producing the malady in one case out of seven. It seems, however, that there have never been any prolonged and satisfactory bacteriological studies supported by inoculations and trials of other kinds, with cultivated virus, with perhaps the exception of the work which has been done here and there, at various intervals, by some European authorities, concerning abortion in cattle.

"A few weeks ago I was called to Montana, to institute researches concerning an outbreak of abortion in the famous Daley ranch at Riverside, Bitter Root Valley, Mont. Mr. Marcus Daley, having perhaps a million and a-half dollars invested in that mammoth institution, and having lost in the neighbourhood 75,000 dollars worth of colts and mares through this malady, had decided to search for the cause by all possible means, and desired that all scientific and practical tests should be made, for the purpose of arriving at the bottom of the trouble. The object of my visit was to study the cause, from a bacteriological and pathological standpoint, and also to make such experiments and investigations as might be found necessary, upon the ground. It was found that out of some thirty odd cases of abortion, in every instance, the disease existed between the placenta and the uterus; a disorganisation of tissue had taken place there, and loosened the two organs. It was found that at the outset, probably only a small colony of micro-organisms began the work of destruction in some portion or other of the adherent uterine and placental walls, and by gradually gaining ground, the separation became more and more extensive, until finally expulsion took place.

"In cases in which the disease occurred just about the time of parturition, or say a week or two before, birth was hastened and sometimes the foal was born alive, but died within a day or two, sometimes a few hours after birth. The naked eye lesions, when perfectly fresh, were as follows:—The loosened portion of the placenta was smooth, soft and slimy to the

touch, and very friable. It was easily torn, and the surface affected, very readily scraped with the nails or a knife. After a few hours, the parts were grayish in appearance. Sometimes this was the case at the time of expulsion, denoting, very likely, still more transformations of the affected parts by the action of micro-organisms. The line of demarcation between these diseased portions (there was only one, more or less extensive), and the healthy portion of the placenta, was unmistakeable. The latter one had the characteristic red appearance to the eye, and sound solid feeling to the touch which is always found in ordinary cases of abortion in mares, while adjoining was the peculiar appearance of the dead diseased tissue, as just described. From the nature of the lesions and their locality, it seems evident that the introduction of the micro-organisms occurred by the vagina. From the fact that the mares presented no premonitory symptom, and that it was therefore impossible to detect, more than an hour beforehand, any animal that was about to abort, and that no record exists as to pre-existing fever, it seems quite likely that the virus could not have been introduced into the placental region by the circulation of the mother. However, tests are being made to determine that point, if possible. But that the disease is transmissible, is unquestionable; the history of the cases referred to demonstrates this fact very well.

"The first cases that occurred were separated a mile or two from other ranches. Several cases took place in this first outbreak. Then the animals which had been exposed, and I think some that had aborted, were transferred to another ranch, where some other brood mares were grazing. Some sixteen or eighteen days afterward, the disease broke out in the latter place. This is only one instance pointing to the transmission of the disease. There are other facts connected with this outbreak, which point to the same conclusion, but which I need not relate here.

"The preventive treatment instituted at the outset, was such as was suggested on general principles by the nature of infections, *i.e.*, quarantine of the healthy stock away from the

diseased animals and infected grounds ; quarantine of those which had already aborted, on the ground where the abortion took place. An antiseptic douche to be wisely administered was also recommended for the animals which had been exposed and had not yet aborted, in order to keep the vagina and the vulva as free from micro-organisms as possible.

"The microscopic study of the disease, and of these micro-organisms is yet incomplete, and it is possible that it will take some time to come to a satisfactory conclusion. We can say conclusively, however, that one form of cocci largely predominated in the diseased walls, and is possibly connected closely with the disease from an etiological standpoint. Bacteriological researches at the Laboratory of Hygiene in this Institution are now under way, and we hope, ere long, to be able to present further points of interest and of practical utility to those interested. Experimental tests are under way ; more will be hereafter instituted to sift this question as thoroughly as possible."

Dr. F. N. OTIS has published an important paper on "Reflex Irritation and Neuroses caused by Stricture of the Urethra in the Female" (*New York Medical Record*, Jan 9th, 1892), a condition which he maintains is by no means of uncommon occurrence. He advises gradual dilatation as the best curative measure. The subject is well worthy of further investigation.

The American Journal of Medical Sciences, for January, 1892, contains several interesting articles.

Dr. A. T. CABOT, of Boston, publishes some important "Observations upon the Anatomy and Surgery of the Ureter," with especial reference to the removal of impacted calculi. The following quotations will chiefly interest gynæcologists:—

"In the female we have even readier access to this part of the ureter through the vagina. The ureter for the last two, or even in some cases three, inches of its course runs in the broad ligament in close relation to the upper part of the vault of the vagina, where it can be reached and incised without danger of opening the peritoneum.

"That so much of the lower end of the ureter lies within the broad ligament, and is accessible from the vagina, does not seem to be generally understood.

"Emmet describes a case in which the stone projected into the bladder enough to give a click when the steel sound passed over it, and in which he cut down upon it from the vagina. He says: 'As soon as I reached the stone, I enlarged the opening forward, toward the neck of the bladder, this being the only safe direction to avoid entering the peritoneal cavity.

"'From my dissections it would seem that, even had the stone lain an inch or an inch and a half higher up in the ureter, it might still have been reached from the vagina without the danger of wounding the peritoneum.

"'The incision for reaching a stone lying above the vault of the vagina should be outward and backward, in order to keep it within the layers of the broad ligament. After the vaginal wall is divided the finger pushes up readily into the broad ligament, and the tissues can be pressed aside until the stone is reached.

"'If then the incision is made through the ureter on its under side, the danger of injuring the peritoneum must be slight. In case it happened that a stone was so lodged in the ureter of a female as to be out of reach from the vagina, and yet not high enough to be accessible from above, the incision over the sacrum might be required for its removal.

"'That the removal of a stone above the vault of the vagina is feasible by vaginal incision, the following case will show :—

"'The patient was a rather stout woman of 39 years of age, and was seen first by me May 15th, 1890. She had for fifteen or sixteen years been subject to attacks of renal colic, always on the left side, and almost always followed by the passage of stones.

"'The last severe attack was in December, 1888, but since that time she had had a number of slight attacks, during which she had passed twenty or more small stones. The attack in which I saw her began five or six weeks before my

visit, and had continued ever since, with pain of varying intensity.

“The urine was at times much diminished in quantity, and for several days before I saw her had been very scanty (from four to six ounces a day). It had during this time been loaded with urates. On the day that I saw her it had become more abundant and less thick.

“The patient had a good appearance, with moist tongue, quiet and steady pulse, and normal temperature. She was perspiring rather freely.

“The pain in the region of the left kidney, and running down toward the bladder, was intermittent and spasmodic in character.

“In the left lumbar region was a distinct tumour about as large as two fists, which was sensitive to pressure. There was also a point of tenderness deep in the left side of the pelvis. By vaginal examination a little hard mass was found in the left broad ligament close to the cervix uteri. This felt about as large as the last joint of the forefinger, and it was very sensitive to pressure. The palpation of it during the examination started a spasmodic pain in the left side that had a bearing-down or expulsive character.

“A sound introduced into the bladder could be carried to within about three-quarters of an inch of this little hard mass, but could not be brought in contact with it by the most careful bimanual manipulation.

“On July 1st I saw her again, and the calculus could be felt in exactly the same place where it had been detected by the examination in May.

“On July 4th the patient was etherised for operation. An incision was made over the calculus through the vault of the vagina just to the left of the cervix uteri. The calculus was easily reached, the grating of the knife upon it being distinctly felt during the first incision.

“After the end which presented had been thoroughly uncovered, it was found that the rest of the calculus was so tightly grasped by the tissues above that it could not be

easily extracted. In fact, the presenting end broke to pieces under the grasp of the forceps with which extraction was being attempted. After trying many manipulations in vain, a blunt hook was passed up alongside of the calculus into the ureter behind, then turned and hooked over the upper end, and traction with this, aided with the finger pressing the tissues aside, finally accomplished the removal of the stone.

“‘The moment it came out there was a rush of pus from above. This pus was of ordinary thickness, apparently not much thinned by urine. Probably from ten to twelve ounces escaped. A rubber tube was introduced into the ureter through the opening made. After the pus had fully escaped the tumour in the abdomen was found to have disappeared. The patient made a good recovery, and the urine, which was very scanty just after the operation, gradually increased in quantity until it became sufficiently abundant. Drainage through the fistula was kept up for some time, and finally, when the drainage-tube was removed, there seemed to be no tendency for the opening to close, there being a constant moderate discharge of pus through it. She recovered strength slowly, as is usual in those cases where the kidneys are seriously involved. She left the hospital on the 25th of July. She continued to gain strength after getting home, and finally was able to be about as usual, doing her ordinary work.

“‘This patient was last heard from in November, 1890, and at that time there was still an opening in the vagina, discharging a small amount of pus. No urine ever came through the fistula, showing that the long distension of the kidney during the complete stoppage of the ureter had sufficiently destroyed the cortex to stop excretion. If at any time the escape of pus into the vagina becomes a serious annoyance it can be stopped by the removal of what remains of the kidney.

“‘The stone that was removed weighed 190 grains. It was elongated, and evidently made up of two stones which had become attached together, as there were two nuclei, one at each end of it.’

“I have endeavoured in this brief communication to point

out the ways in which the ureter can be safely cut down upon in different parts of its course for the purpose of removing calculi impacted in it ; and my dissections have led me to think that by a properly selected operation a stone can be removed from any part of this canal by an extra-peritoneal incision."

(In connection with this, two cases of calculus impacted in the ureter, narrated by Dr. JOHN W. TAYLOR at the meeting of the Midland Medical Society, on November 25th, 1891, have considerable interest. Dr. Taylor, in each instance, had diagnosed the condition from the presence of a little painful tumour felt on vaginal examination in the situation of one ureter near its entrance into the bladder. In one of the cases the stone had passed, with disappearance of the local tumour, and the calculus from this case was shewn. In the other case the tumour persisted.)

The same number of our contemporary contains an excellent article by Dr. JAMES H. ETHERIDGE on Medical Gynæcology, of which the following is the key-note : "The most successful specialist is he who is a good general practitioner. The best all round gynæcologist is he who has been and is a good general practitioner." To prove this the author practically urges that a woman has component parts outside the pelvis. His diagnosis of the causes of backache is typical of the practical character of the whole article. "Nearly all gynæcological patients complain of backache, but the merest tyro soon learns that there are backaches and backaches. A great many backaches exist which are not gynæcological, and it is very desirable to distinguish them, and treat them successfully. We will be aided greatly in the study of backaches if we take them up regionally. We will thus find that we have the dorsal backache, the lumbar backache, and the sacral backache. It may be said, in a general way, that *all backaches are produced by organs anatomically, not topographically, in front of the seat of the pain.* Bearing this fact in mind enables us to unravel a backache that has resisted all former treatment.

"The dorsal backache, in the great majority of cases, has the stomach or liver for its cause. The particular variety of stomach trouble most commonly found as a cause of this form of backache is the fermentative dyspepsia, which invariably produces, sooner or later, dilated stomach. The physical symptoms of dilatation of this organ are well known. In organic diseases of the stomach, as gastric ulcer or malignant disease, the symptoms need scarcely any consideration here. The form of trouble met with in the liver, which produces this form of backache, is congestion. With the knowledge of these two causes before us, the treatment of dorsal backache becomes, in the majority of instances, a very easy matter. On the same plane with the dorsal region are the pleura, lungs, the insertions of the diaphragm, the spleen, and the pancreas. But it is so seldom that diseases of these organs demand our attention that they will not be considered here.

"Lumbar backaches, in the majority of instances, depend upon the bowels and the kidneys. Where a protracted constipation exists, its removal will almost always cure this form of rachialgia. It is only occasionally that it is necessary to consider the kidneys as a cause of lumbar backache. Now and then, we will meet with a more or less persistent pain at the juncture of the lumbar and sacral regions, which is uniformly attributable to malposition of the uterus.

"The sacral backaches almost always find their cause in the pelvic organs, and for their relief we will have to consider the uterus, tubes, and ovaries. Oftentimes, the rectum will have to be taken into consideration. The persistent gnawing pain at the extreme lower end of the sacrum is usually explained by disorders of the anus. No reference is here made to coccygodynia.

"The backaches found in cases of neurasthenia may be considered as a disorder, to a greater or less extent, of the central nervous system. There is a form of backache that is invariably muscular, which depends upon the rheumatic or gouty poison for its cause. Its exacerbations in changes of the weather indicate its origin. Anti-lithic and anti-rheumatic remedies and plasters will relieve it."

**SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS.**

GYNÆCOLOGY.

VAGINAL.

Dr. S. K. OLENINE of Russia (*Archiv. of Gynecol. Obstet. and Pædiat.*), February, 1892, reports the following case, which is especially interesting, as multiple fibromata in the vagina are extremely rare.

The patient was thirty-two years old. Courses came on at sixteen. At seventeen she was married, and at eighteen she was delivered of twins.

At nineteen the menses stopped for over three months and then came continued hæmorrhage which lasted a year.

A year ago she noticed something in the vagina, and then followed hæmorrhage, leucorrhœa, difficulty in walking, and dyspareunia.

On examination a tumour was felt immediately behind the entrance to the vagina, lobulated and filling the whole cavity, adherent by a large pedicle to the posterior wall.

Operation without narcosis.

The tumour was drawn outside the vagina by means of forceps, the pedicle ligated, and the mass cut off with scissors.

The posterior and lateral walls of the vagina were sown with similar tumours, from the size of a nut to that of a pigeon's egg, and these were also enucleated—sixteen in all.

At a second operation eleven more were taken away, and still later two others.

Closure of Vesico-vaginal Fistulæ by Transplantation of the Bladder-wall.

BARDENHEUER (*Deutsche med. Wochenschrift*, 1891, No. 50) reports two successful cases of this operation for difficult utero-vesical fistulæ, the technique of which is as follows:— With the patient in Trendelenburg's posture, supra-pubic cystotomy is performed, and the peritoneum is dissected away from the anterior surface of the bladder as low as the fistula. The adhesions and cicatricial tissue in the vicinity of the bladder are now separated, the edges of the fistula are denuded, and while they are pressed together by a finger passed into the bladder through the supra-pubic wound, silver wire sutures are introduced from the vaginal side. The catheter is passed every three hours, and the artificial wound is left open and plugged with gauze. This method, the writer believes, will also be useful in closing large defects in the bladder left after the removal of tumours by epicystotomy, by introducing the finger and sliding over flaps of healthy tissue into the wound while the sutures are passed.

UTERINE.

TANNEN (*Archiv. f. Gyn.; Am. Jour. Med. Scien.*) presents the statistics of the Breslau clinic from June, 1883, to November, 1889, including 106 cases of vaginal hysterectomy, which are especially interesting as showing the ultimate result of this operation; the mortality in the first sixty-three cases being 11.6 per cent., in the last forty-three cases 6.9 per cent. Two deaths in the first series were due to ligation of the ureters, two to sepsis and one to iodoform poisoning. In the second series there was only one death from sepsis. Forty-seven and four-tenths per cent. of the patients were free from a recurrence at the end of three years but several were reported as well six years after the operation. Since the disease recurred from four to six years afterwards, the writer believes that the operation can hardly be regarded as promising a radical cure. He believes that

when the disease reappears it is usually within the pelvis rather than in the cicatrix, and usually occurs within a year after the operation, the average being seven months. When there are infiltrations in the broad ligament the best treatment is thorough cauterization, which certainly prolongs life.

Vaginal Hysterectomy for Cancer.

GOODELL (*Medical News*, December 5, 1891) states that in uterine cancer, when the vagina and broad ligaments have not become involved, or the uterus fixed by adhesions, removal of the womb is an extremely satisfactory operation. With proper attention to technique, the writer is convinced that vaginal hysterectomy for cancer "far surpasses, in its remote and permanent success, not only all other operations for cancer of the womb, but also all operations for cancer in other parts of the body." Allusion is made to the mortality of 15.1 per cent. among 311 cases of vaginal hysterectomy, compiled by A. Martin, and a mortality of 15.6 per cent. in 778 cases of excision of the breast, collected by Kæster. Cancer of the breast is apt to be detected earlier in its course than is cancer of the uterus. Of all operators Leopold has the best record showing the remote results of vaginal hysterectomy for cancer. Out of seventy-six of his cases remaining under observation after recovery, all but four were well, with no evidence of recurrence of the disease, from one to five and a half years after the operation. Although having abandoned the operation some years ago, owing to disastrous results, Goodell remarks that recently, after watching German operators and German statistics, he has become a "zealous convert," and does not hesitate to assert that "in vaginal hysterectomy we have a most potent weapon against a most deadly disease." During six weeks, the writer performed the operation three times, in each case, the convalescence being uninterrupted.

The first step in the operation consists in curetting the cervix and searing it by the Paquelin cautery. The cavity

formed is then packed with iodoform gauze, and the lips sewed together to prevent contamination of the peritoneum from any uterine leakage. The vagina is next irrigated with 1:1000 mercuric chloride solution. The cervix uteri is dragged downward and forward and Douglas's pouch opened. Quilted sutures of catgut are passed uniting the edge of the peritoneum to that of the posterior vaginal wall, and, as the incision is prolonged on either side up to the broad ligaments, additional sutures are put in to prevent stripping off of the peritoneum and to check hæmorrhage. A roll of iodoform gauze is packed into the pelvic opening to protect the intestines. This roll has a knotted string attached in order to distinguish it from the other ligatures. By now dragging the cervix backward and downward a transverse incision is made above the os, and the bladder is stripped off, until the peritoneum is reached. After opening this, quilted catgut sutures are used as before. Successive portions of the broad ligaments are tied (by means of two aneurism-needles, one curved to the right and the other to the left) and cut off from the womb. The delivery of the womb is readily accomplished by bringing the fundus either through the posterior or the anterior vaginal incision. If possible the removal of the ovaries and tubes should be done, for fear of their containing cancer-germs. The iodoform tampon is now removed from the pelvic cavity, the long ends of the suture are cut off, and the stump of either side brought to a level of the opening in the vaginal roof and secured, by one or two through gut-sutures, to the corresponding extremity of the incision.

For drainage, a strip of iodoform gauze is packed into the pelvic cavity through the small opening in the vaginal roof; some more gauze loosely packed in the vagina. Bowels are opened about third day, following which, both pieces of gauze are removed. Vaginal douches should not be used for a week for fear of disturbing union.

The use of clamps to secure the broad ligaments after operation is not advised. Catgut ligatures are much preferred to the use of silk in this operation.

Diagnosis of Carcinomata of the Body of the Uterus.

The *American Gynæcological Journal*, November, 1891, contains a translation of an article by HOFMEIER and LEOPOLD (*Gazzetta degli Ospitalia*) upon this subject. Hofmeier regards cancer of the body of the uterus as an epithelial growth having its origin in the superficial epithelium or in that of the glands. LEOPOLD holds practically the same view and insists that such tumours never originate in the connective tissue. He advises the abandonment of the term malignant adenoma, "for the word adenoma indicates a benign glandular tumour, and if the neoplastic glandular tissues present the characteristics of malignity, the condition in question is a papillary carcinoma." The development of the growth is said to depend upon a diffuse infiltration much more frequently than through the formation of isolated nodules. HOFMEIER states that cancer in this part of the uterus develops frequently in multiparæ or in women of small family, and rarely appears before 50 years of age. The earliest symptom is usually hæmorrhages, which are followed by a serous discharge, more or less fetid. Pain, similar to that of uterine colic, is also present.

The Growth of Fibroid Uterine Tumours after the Menopause.

JOHNSON (*Annals of Gynæcology and Pædiatry*, February 18th, 1892) says his experience with uterine fibromata has taught him that there are numerous exceptions to the popular belief in regard to these tumours ceasing to grow, or to give rise to symptoms, after the menopause. The writer quotes from several authors — Hegar and Kaltenbark, Schooler, Busley, Borner and Lawson Tait—who are of the same opinion, Tait having operated upon four women who had passed the menopause and yet suffered from rapidly growing myomata.

He gives five cases, ranging in age from 50 to 61, which had come under his own observation, in which the mass continued

to increase in size after the catamenia had ceased. There is no doubt that most English gynæcologists have seen many similar cases.

MULLER (*Archiv. f. Gynäkologie*) has made a careful study of the influence of the menopause upon fibroids of the uterus, based upon 109 cases. He found that while in many cases the tumour evidently diminished in size after the menopause, in nine instances it was clearly proved that the neoplasm continued to grow; such an increase in size was noted in women aged fifty-six and seventy-nine respectively. He infers that it is not safe to trust too much to the curative influence of the menopause.

OVARIAN.

F. HOWITZ and LEOPOLD MEYER (*Gynak. og Obstetr. Meddel.*, vol. viii. parts 3 and 4, 1891; *British Medical Journal*) describe four cases of removal of the ovaries for epilepsy. The results are on their own admission, discouraging. The cases were under observation for from two and three-quarters to four years. In all, the ovaries were more or less diseased. In one case, only, was the patient cured. The fits increased during pregnancy. In the second, the same symptom was observed, but after the operation the patient's condition was slightly improved. In the third and fourth, no improvement followed lactation, yet in the third the epileptic fits had always increased in number and severity during catamenial periods and from thirteen months after the operation no show ever appeared. In the fourth, the fits had ceased for four years, and recurred when the patient was suckling. All the four patients had been subject to fits for over seven years, the first or successful case having been epileptic for thirteen years at the least. In three out of the four complete amenorrhœa followed the operation. In the third, there was a typical irregular hæmorrhage from the sixth to the thirteenth month after the oöphorectomy.

In a paper read before the New York Obstetrical Society, Dr. C. C. LEE, says, (*N.Y. Jour. Gynecology and Obstetrics*)

some defect in the instruction of gynæcologists must exist to render possible the universal condemnation by intelligent observers, of castration, for an almost endless succession of cases had been cited of recovery without the operation where it had been considered a necessity ; and of others where operations had been followed by increased ill health or complete nervous breakdown. There is a guide by which a clearer appreciation can be had of the cases that actually need operation, while those unsuitable for it are eliminated if we only care to bear it in mind. In general it may be asserted that no neurotic cases are fit for this operation, and this applies not only to the "hystero-neuroses" but to epileptic cases as well. Beyond a temporary arrest of the convulsions of epilepsy, the influence of castration in these cases has been found quite negative. *Per contra*, it is equally certain that where extensive structural change exists in the appendages, especially when this is of pyogenic origin, nothing but removal of the diseased tissue cures the patient.

These questions only, then, should occupy our mind when contemplating laparotomy for this purpose.

1. Is removal of the appendages really necessary in this case, or will any medical and hygienic treatment compass the same end.

2. Will castration, even if, at first, successful, ultimately effect the patient's recovery of health or contribute to it?

Certainly if we restrict our laparotomies within these limits we may confidently court criticism from any quarter. Twenty-six cases, operated upon, from five to eight years ago, have annually reported, and the salient points shown by these reports are :

1. That relief of pelvic pain has come but slowly, usually after the first year had elapsed, yet completely in all cases where the appendages were structurally diseased. In the neurotic cases it is in some instances still persistent.

2. The secondary local effects of operations have quite often seriously affected the patient's after health. Thus in six of the twenty-six cases, menstruation continued for periods varying from two months to two years.

In six cases also, more or less perimetritis occurred and much retarded recovery, although leaving no permanent disability. In two, acute cystitis and subsequent vesical catarrh occurred and have since relapsed.

In one, secondary hæmorrhage from an apparent hemorrhagic diathesis followed operation, and the patient was only saved by transfusion.

3. The remote effects on the nervous system and general health have been almost uniformly good, where the section was done for structural disease of the appendages. The most satisfactory results come but slowly, generally after the first year. More than this, Dr. Lee thinks it is unsafe to promise in any case, however favourable it may appear. But in no single case has the patient become completely well where section was done for neurotic conditions.

4. Little or nothing can be reported of the effect of the operation on the sexual appetite, as few patients seem willing to reply on this head. This, however, is of little importance.

5. Finally, as to the causation of mental depression or derangement as a remote effect of removal of the appendages, the writer's opinion was emphatic. The neurotic cases remain unchanged, but the patients whose health was being undermined by acute or chronic structural disease of the appendages almost uniformly improve, mentally as well as physically.

URETHRAL.

Endoscopy in Diseases of the Female Urethra.

EBERMANN (*St. Petersburger Med. Wochenschrift*, 1891, No. 47) has devoted considerable study to this subject. He calls attention to the following points to be noted in examining the normal urethra with the endoscope:—The mucous membrane is thrown into folds which radiate from the dark spot which represents the centre of the endoscopic image to the periphery. The colour of the urethral mucosa is a delicate pinkish-yellow. Littre's glands cannot be seen unless they are swollen and inflamed.

In acute gonorrhœal urethritis the endoscopic appearances are the same as in the male, *i.e.*, the mucosa is dark red, swollen, and the normal folds are obliterated; the membrane bleeds readily and is extremely tender to the touch. In chronic urethritis vascular granulations of a dark red colour are seen. Littre's glands appear as prominent elevations, the normal folds of the mucous membrane being obliterated in their vicinity. Rarely strictures of the female urethra are found, usually of traumatic origin; they appear, when seen through the endoscope, as white cicatrices.

GRUNFELD has described fissures at the neck of the bladder, which are most clearly seen through a fenestrated instrument. They are best treated by direct applications of nitrate of silver (a drachm to the ounce), followed by the introduction of a gelatin pencil containing half a grain of muriate of cocaine. (Several successful cases cited.) Acute urethritis in the female is to be treated by rest, regulation of diet, sitz baths and douches, the chronic form by applications of nitrate of silver solution or pure tincture of iodine (?) followed by the introduction of iodoform pencils.

MAMMARY.

G. MANDRY (*Beitrag zur klin Chir.*, 1891, vol. viii., pt. 1 (quoted in the *British Medical Journal*) distinguishes two forms of primary tuberculosis of the mammary gland. The first is very chronic, a low inflammation with induration caseation, softening, and the formation of granulation tissue lasting for an indefinite period. Abscesses, fistulæ, retraction of the nipple, and secondary infiltration of the axillary glands appear in the course of years. The second form is intra-mammary cold abscess, a dense elastic swelling full of thin cordy pus. Transitional forms have been described. Tuberculosis of the breast is of a benignant character as it is poor in bacilli. The granulation contain many giant cells. The course of the disease is always slow. It appears to begin most frequently after pregnancy and lactation, and the marked symptoms—

swelling and induration—take nearly two years to develop, and not till many months later, do fistulæ form. It is this last symptom that causes the patient to seek medical advice, as the disease is hardly ever painful. The first variety of tuberculous breast is not easy to diagnose, except when advanced. Cold abscess of a tuberculous breast is much more readily recognised, especially as it is usually associated with tubercle elsewhere. MANDRY advises amputation with clearing out of the axilla as the right treatment for tuberculous breast. He has observed seven cases and describes twenty-one others recorded. One of the twenty-eight was in a male patient.

GENERAL, OPERATIVE, &c.

Obesity in its Relation to Menstruation and Conception.

W. S. MCKEE (*New England Medical Monthly*, November, 1891), commenting upon the frequent association of obesity and menstrual disorders, makes the following generalisations :—

1. Obese women usually have scanty menstruation, the periods being irregular and usually accompanied by sacral pains.
2. Obese women are very liable to abort, or if they go to term, to produce offspring deficient in vitality.
3. Obese women are very frequently sterile, and in such the sterility has been cured by abdominal massage, purgation, and a strict dietary.

SCHLEICH (*Berliner klin. Wochenschrift*, No. 35, 1891) reports three cases in which he performed laparotomy, after inducing local anæsthesia with ether and cocaine. The patient first inhaled only sufficient chloroform to render her partially unconscious. The abdomen was then sprayed with ether until the skin was rendered insensitive. Between forty and fifty superficial and deep injections of a weak solution of cocaine (three-fourths of one per cent.) were then made along the line of the proposed incision, no more than a grain of the alkaloid being used. In order to increase the action of the

drug the extremities were encircled with Esmarch's bandages. In the operations described (two ovariectomies and a gastrotomy) the patients were entirely conscious throughout the operation, and stated that the pain was slight, even when firm peritoneal adhesions were separated. They had no unpleasant symptoms, and made a good recovery. The method is recommended in cases in which ether and chloroform are contra-indicated.

Dr. R. LEFOUR (*La Semaine Médicale*, No. 50, 1891; *Lancet-Clinic*) soaks his laminaria tents eight days in the following solution before using them to dilate the os uteri, and claims that the process is thereby rendered painless:—

R. Ether	...	..	...	...	...	fl 3 ijss
Iodoform	...	...	...	...	...	3 ijss
Cocain. pur	...	...	...	...	...	...3 j¼

He prefers the pure alkaloid cocaine, to its salt, the hydrochlorate, as the anæsthetic action of the cocaine salts is less than that of the pure alkaloid.

Menstrual Congestion of the Dental Pulp.

RÉGNIER (*Revue Médico-Chirurgicale des Mal. d. Femmes*, December, 1891) reports the case of a lady who had a carious tooth plugged with platinum, the pulp being exposed while the cavity was bored out. Every month thereafter, exactly at the time of menstruation, she had severe neuralgia in the affected tooth, lasting for forty-eight hours. The only satisfactory explanation seemed to be that there was a periodical congestion of the pulp, causing it to swell and press against the filling, thus producing neuralgic pain.

THE FUNCTIONS OF THE REPRODUCTIVE APPARATUS IN AMERICAN INDIAN WOMEN.

From a careful investigation, Currier (*American Gynecological Journal*, November, 1891, quoted in *University Medical Magazine*, February, 1892), reaches the following conclusions:



Puberty.—Its early or late appearance is not influenced much by the fact of living in a savage state, but depends more upon climate, occupation and heredity. Among tribes living in the warm sections, the average age for its appearance was found to be $12\frac{1}{2}$ years; while in women belonging to tribes of the north, 17 years was the average.

Menstruation.—The onset, course and cessation of menstruation were alike matters of indifference to the majority of Indian women. At four agencies the duration of the period has been noted, and the limits given were two and six days. Dysmenorrhœa was scarcely known, except occasionally at the first period, although among the civilised Indians it was not infrequent. But one case of amenorrhœa was known. The advent of the *menopause* varies as much as it does among civilised women, but they are exceptionally free from the nervous and vascular disturbances which affect the latter at such times.

Marriage and Sexual Appetite.—Marriage is consummated in most of the tribes, before the seventeenth year, and its ties are not binding. Polygamy exists in some of the tribes, despite the efforts of the Government to abolish it. The sexual appetite, as a rule, is ardent.

Conception and Gestation.—By reason of her habits of life, the Indian woman is very fruitful, but the course of gestation is commonly interrupted by the practices of the abortionist.

Parturition.—The ease with which this act is accomplished is worthy of note. The squatting or kneeling posture is assumed during labour, and seems to favour muscular effort more than the positions with which we are familiar during confinements.

Puerperal disease is apparently unknown, an immunity which depends upon plenty of exercise and pure air—not upon the use of antiseptics.

Accidents occasionally occur to the parturient woman, just as they do among animals, and death to one or both individuals results, unless intelligent aid be summoned. It is at such times that the agency physician is allowed to approach

an Indian woman in labour and render valuable service ; but as a rule, no man, either civilised or savage, is permitted near a woman in this condition.

Pelvic Diseases.—While such diseases have not been treated in Indian women, it is scarcely proper to infer that they do not exist to some extent. Diseases that result from infection, deformity, mal-development and faulty circulation probably exist, but will not be heeded "until the suffering caused by them becomes keener and confidence in educated physicians stronger." Malignant diseases of the reproductive organs are practically unknown, which fact seems to prove that neither privation, hard work, exposure nor frequent child-bearing necessarily results in the neoplasms which so commonly distress civilised women.

Venereal Disease. — Local and constitutional forms of venereal disease abound among Indian women. Syphilis causes a great mortality among infants and leaves a marked impress upon the health of those who survive infancy.

OBSTETRICS.

KRUKENBERG (*Zeitsch. f. Geburtsh. u. Gynäk.*, Band xxi., Heft 1) describes a case of poisoning from a 2.7 per cent. solution of carbolic acid injected into the uterus of a multipara who had aborted after some necrotic decidua had been brought away by curetting. The pulse suddenly failed while the injection was being given ; then, as the pulse improved, the breathing ceased, which, after a time, was overcome by artificial respiration. Death followed ten days later, the *post-mortem* showing acute parenchymatous nephritis with endocarditis. The case once more proves the grave dangers of the employment of poisonous antiseptics in washing out the puerperal uterus.

HOLOWKO (*ibid.*, Heft 2) publishes an unusual case. The patient a pregnant multipara, strained to lift a heavy weight of clothes. Pain in the abdomen came on and rapidly increased in severity. The temperature rose to 104°, the pulse to 120.

Labour came on, a dead child was born. The pains grew worse. The abdomen became distended, the pulse rose to 140°, and soon after the placenta came away she died. The *post-mortem* showed that the uterus was healthy, but that a large quantity of fluid blood which filled the abdomen had evidently come from adhesions round the ascending colon which had recently been ruptured. There were no signs of anæmia, and the hæmorrhage had not been diagnosed.

THE value of the tampon of iodoform gauze in treating *post partum* hæmorrhage is proved by Staheli (*Correspondenzblatt für Schweizer Aerzte*, No. 21, 1891, quoted in the *American Journal of the Medical Sciences*, January, 1892. In the clinic at Berne, 9 fatal cases of *post partum* hæmorrhage occurred in 5424 births during a period of eight years. In 49 cases in which the tampon was used, better results were obtained than by any other method of treatment. These cases were divided into two groups: one, in which hæmorrhage occurred from a source which was determined, and the other, in which the tampon was used as a prophylactic against hæmorrhage. In the first, were cases of placenta prævia, transverse position, and other similar complications. In the second class, were cases of contracted pelvis, and also of Cæsarean section. In using the tampon, strips of iodoform gauze are preferred; thorough antiseptic precautions should be taken to disinfect the patient and the material which is used.

COMPLICATIONS OF PREGNANCY.

Pregnancy Complicated by an Ovarian Cyst and a Displaced Kidney.

In the *Mittheilungen aus der Göttinger Frauenklinik* (*Archiv für Gynäkologie*, Bd. 41, H. 1 and 2, quoted in the *University Medical Magazine*, January, 1892), RUNGE, in addition to an entertaining history of the Göttinger Maternity, just 100 years old, and of the distinguished men who had presided over it, among them Osiander, reports, among some interesting personal observations in that institution,

first the case which furnishes the title to this abstract. The woman had three abdominal tumours; one to the left, evidently a pregnant uterus; another to the right, as evidently an ovarian cyst; and a third in the middle over the promontory and upper portion of the sacrum, the nature of which was not made out till some time after the abdomen had been opened for the removal of the ovarian cyst. This was done in the fifth month of pregnancy, and no ill consequences followed. In the eighth month the diagnosis of displaced kidney was made. The woman had a flat, rachitic pelvis, the antero-posterior diameter of which was still further decreased, of course, by the position of the kidneys. Labour was induced in the last month and the child delivered by version and extraction, on account of a shoulder-presentation. The right arm was caught between the head and the kidney and purposely broken. The child was born alive and did well. RUNGE says he can find but three cases in literature in which a congenitally displaced kidney was a complication of labour.

Acute Oöphoritis Complicating Pregnancy.

In the *American Gynecological Journal* for December, 1891 (quoted in the *University Medical Magazine*, January, 1892), Dr. Henry C. Coe reports three cases of acute oöphoritis complicating pregnancy, and from their study makes the following practical deductions.

Etiology.—Acute non-puerperal oöphoritis, even resulting in the formation of an abscess, is not so rare as Olshausen would lead us to believe. While it is frequently associated with tubal disease, it may occur independently of the latter, being due to septic infection, transmitted from the uterus through the lymphatics rather than along the tubes. While septic or specific infection is the principal cause of acute inflammation of the ovary, such inflammation may result from sudden congestion, or even from traumatism, especially if the organ is already diseased. There is every reason to

believe that such an ovary may be subject to recurrent attacks of inflammation, just the same as a diseased tube. That the ovaries are normally in a state of extreme congestion during pregnancy has been noted by every one who has performed Cæsarean section. If this congestion occurs in a gland previously diseased and surrounded by perimetric adhesions, it is evident that it must be peculiarly susceptible to acute inflammation. If an ovarian abscess already exists, the element of sepsis is present, and the traumatism incident upon sudden emptying of the uterus and traction upon the sac may lead to the most serious results.

Symptoms.—The symptoms of septic puerperal oöphoritis are usually masked by those of the accompanying salpingitis and general peritonitis, but in the acute non-puerperal form they ought not to be mistaken. The sudden onset and distinct localization of the pain are characteristic. The pain is of a peculiar lancinating character, often radiating down the thigh, and is quite different from that of ordinary para- and perimetritis. Evidences of general peritonitis are absent, though it may at first be suspected on account of the tympanites. There is well-marked tenderness on palpation over the painful area, even though no induration may be felt. The development of septic symptoms (as indicated by repeated chills, irregular elevations of temperature and sweating) points to suppuration in the ovary, which suspicion is confirmed by the presence of a peculiar fetid diarrhoea, a symptom on which I have previously laid stress. The latter is not necessarily indicative of rupture of the abscess into the bowel.

Diagnosis.—This is especially difficult if the ovary is buried in a mass of adhesions. It is doubly so during pregnancy, when the affected organ is elevated, so that it can seldom be reached *per vaginam*. Under these circumstances little positive information can be gained by the bi-manual examination, and palpation of the abdomen may give an equally unsatisfactory result. A thorough review of the previous history of the case, the acute nature of the attack, and the

localised pain will at least warrant an inference as to the seat of the trouble, and direct the physician's attention to the ovary. Careful observation of the case will enable him to exclude other local and general febrile affections and to arrive at the diagnosis. We should not forget that a pregnant woman *may* have any disease which affects the non-pregnant.

Hyperemesis Gravidarum.

KEIL (*Muenchener medicinische Wochenschrift*, No. 41, October 13, 1891) reports a very interesting case of hyperemesis gravidarum. In discussing the subject he excludes cases of diseases of digestion, of the kidneys, or of the sexual organs, and confines himself to those due to functional disturbance of the nervous system.

He quotes the following case: a patient in the seventh month of her first pregnancy, was seized with uncontrollable and persistent vomiting, which reduced her to extreme emaciation. He tried many remedies without avail, but finally suspected hysteria, and acting on this supposition, removed the patient from her home and all communication with her friends. The stomach was washed out and she quite recovered, and pregnancy continued to term without further trouble. The conclusion is drawn that the case was purely neurotic. If she had recovered without the washing out of the stomach, this argument might have been more conclusive. But the case is very instructive in any aspect.

KALTENBACH (*Boston Med. Surg. Jour.*) holds that the clinical history and the "cures" of cases of uncontrollable vomiting of pregnancy indicate that the disease is essentially due to hysteria. Pregnancy involves physiological and psychological conditions favorable to the development of hysterical symptoms in a modified form. Hyperemesis is often cured by a process akin to suggestion, like ordinary hysteria. "Doing something," dilatation of the os, massage, &c., often succeeds if the practitioner gains the patient's confidence, and hosts of drugs have answered, apparently

under the same conditions. On the other hand, all these vaunted medicines and operations have failed when employed by physicians who possibly did not possess as much tact as knowledge. Hyperemesis may suddenly cease if the patient be alarmed, as in a case of the author's, where the patient was reduced to a skeleton ; a day being fixed for the induction of labor, her friends frightened her by saying that she could not survive such an operation. The vomiting ceased. The same sudden arrest of hyperemesis was observed by Cazeaux in a young wife whose husband was seized with symptoms of strangulated hernia. In a third case, the vomiting ceased on the outbreak of an acute exanthematous fever. The writer describes a bad case where the patient, aged 21, made an unhappy marriage, and was unkindly treated by her husband. Very severe vomiting set in during her first pregnancy, and she was sent into a hospital. It was suggested to her that she had lumps of unwholesome material in her stomach, and that their removal would cure her. Some milk was given to her, ceremoniously, and shortly afterwards the stomach was washed out. Its contents bore no indications of either over-acidity or any abnormal ferment. The patient was then informed that all was right, and that the vomiting would not return. It ceased accordingly and she was safely delivered at term. In short, Kaltenbach urges that hyperemesis gravidarum should be treated as a purely hysterical complaint. Prompt treatment is indeed necessary, for as in hysterical vomiting of non-pregnant women the patient may, if at first neglected, die of syncope or nervous exhaustion even when the vomiting has been stopped. But isolation from domestic cares and imprudent friends, with appropriate moral treatment, should be enforced before so extreme a step as artificial abortion is undertaken.

ABNORMAL PREGNANCIES.

Ruptured Right Tubal Pregnancy, with Perforation of the Vermiform Appendix.

A fatal case of hæmorrhage from ruptured tubal pregnancy is described by ROBB in the *Johns Hopkins Hospital Bulletin*,

No. 17, 1891. The patient had complained of abdominal pain for a week before coming to the hospital. There was impairment of appetite and a condition of mental hebetude. The abdomen was uniformly distended, with an indistinct sense of fluctuation. Upon laparotomy, the peritoneal cavity was found to be filled with dark fluid blood. The right tube was ruptured; the feeble condition of the patient made it impossible to proceed with the operation. The tube and ovary on the right side, where rupture had occurred, were removed, but the patient perished soon after. On *post-mortem* examination an extensive perforation and sloughing of the wall of the appendix were found. It is probable that adhesions formed between the appendix and the right Fallopian tube, and that the immediate cause of perforation was tubal pregnancy.

Two Cases of "Missed Abortion."

CHOLMOGOROFF (*Zeitschrift für Geburtshülfe und Gynäkologie*, Band xxii., Heft 2) reports two cases of missed abortion which were remarkable for the length of time during which the ovum was retained. In the first of these cases, the life of the embryo persisted for four months, while the product of conception was retained for seven months after the death of the embryo. The entire pregnancy persisted for eleven months. In the second case, the embryo perished at three months, but was retained for two months after death in the uterus. In neither case was operative interference indicated; the patients were kept under observation, and the expulsion of the ovum followed spontaneously. Both patients made uninterrupted recoveries.

Double Tubal Pregnancy.

At the meeting of the Berlin Obstetrical and Gynæcological Society on January 8th, 1892 (quoted in the *University Medical Magazine* for April, 1892), MACKENRODT reported a very interesting case of double tubal pregnancy and demonstrated the specimens.

The patient was 32 years old. She had been married twice—the first time seven years, during the first three years of which period she had borne two children and had aborted once. After the death of the first husband she remained a widow two years and then married again. In May, 1890, the period was missed. In June an irregular bleeding began, with sharp pain on the *right* side, and a high elevation of temperature. The diagnosis of extra-uterine pregnancy was made, and an operation urged, as symptoms of internal bleeding appeared. The patient, however, refused, gradually recovered, and in two months was able to leave her bed, and regained her strength by a visit to the country. She still suffered, however, from the peritoneal adhesions, and was unable to attend to her household duties. From October, 1890, the menstruation became regular again. In September, 1891, the period was again missed. About the end of October an irregular bleeding began, with sharp pains on the *left* side, and a high elevation of temperature (40.5° C.). On examination, a hard mass was felt to the right of the uterus, and a soft tumour the size of a goose-egg to the left of, and behind, the uterus. An operation was now allowed. The left tube burst during removal. It contained an ovum, unmistakable on both macroscopic and microscopic examination. On the right side, in a cavity surrounded by adherent intestines and into which the right tube opened, were found the small bones of the foetal extremities.

OBSTETRIC OPERATIONS.

Porro's Operation with Intra-peritoneal Treatment of the Stump.

RUNGE (*Univ. Med. Magazine*, Jan., 1892) describes a Porro-Cæsarean section on account of osteomalacia, in which the stump was dropped. The cervical mucous membrane was excised, the canal disinfected with a ten per cent. solution of carbolic acid, and then closed with the whole stump by two layers, one above the other, of interrupted silk sutures. The broad ligaments were, of course, also tied. The woman made a good recovery.

NOTES.

BRITISH MEDICAL ASSOCIATION.—THE Sixtieth Annual Meeting will be held at Nottingham on Tuesday, Wednesday, Thursday, and Friday, July 26th, 27th, 28th and 29th, 1892.

C. OBSTETRIC MEDICINE. *President*: Alfred Lewis Galabin, M.D. *Vice Presidents*: George Elder, M.D.; Herbert Owen Taylor, M.D. *Honorary Secretaries*: Harry Michie, M.B., 27, Regent Street, Nottingham; Herbert Ritchie Spencer, M.D., 10, Mansfield Street, Cavendish Square, W. The two following subjects have been selected for special discussion: 1. The Treatment of Uterine Fibroids, to be opened by J. Knowsley Thornton, M.B., C.M.—J. H. Aveling, M.D.; A. E. Aust-Lawrence, M.D.; T. Moore Madden, M.D.; P. Horrocks, M.D.; A. D. Leith Napier, M.D.; W. J. Tivy, F.R.C.P.E.; A. W. Mayo Robson, F.R.C.S.; Lawson Tait, F.R.C.S.; G. Elder, M.D.; H. Michie, M.B.; J. Wright Baker, M.R.C.S.; W. J. Smyly, M.D.; E. S. Bishop, F.R.C.S.; R. C. Bennington, M.B.; A. W. Edis, M.D.; and W. Walter, M.D., will take part in the discussion. 2. *Post-partum* Hæmorrhage, to be opened by G. E. Herman, M.B., F.R.C.P., F.R.C.S. A. E. Aust-Lawrence, M.D.; W. C. Grigg, M.D.; P. Horrocks, M.D.; H. Spencer, M.D.; W. J. Smyly, M.D.; J. Wright Baker, M.R.C.S.; F. R. Mutch, M.D.; Wm. Bain, L.R.C.P.; C. E. Purslow, M.D.; A. W. Edis, M.D.; R. C. Bennington, M.B.; and W. Walter, M.D., will take part in the discussion.

The following papers are announced:—A. E. Aust-Lawrence, M.D., "The Proper Use of Midwifery Forceps;" W. Bain, L.R.C.P., "A Consideration of the less Obvious Causes of Retardation in the First Stage of Labour;" E. S. Bishop, F.R.C.S., "Note on a Case of Cystocele treated by Stoltz's Method;" F. Borough, M.R.C.S., "Ergot as a Muscular Tonic during Pregnancy;" C. J. Cullingworth, M.D., "Some Remarks on the Anatomy of the Hymen and of the Posterior Commissure of the Vulva;" A. W. Edis, M.D., "The Indications for Abdominal Exploration;" J. Dysart McCaw, F.R.C.S., "The Medicinal and Mechanical Methods of Expediting

Childbirth ;" H. McClure, M.D., "On the Electrical Treatment of Uterine Fibroids scientifically considered ;" T. More Madden, M.D., "*Post-partum* Hæmorrhage ;" James Murphy, M.D., "Notes on a Case of Vaginal Myomectomy ;" A. D. Leith Napier, M.D., "Stoltz's Operation for Cystocele ;" W. Walter, M.D., "A Case of Tubal Gestation in which both Tubes were Gravid ; Operation, Recovery."

The Denver Medical Times for February published the following pathetic, and doubtless veracious, ballad.

BUT HE CAN'T ADVERTISE.

A physician sits in his office chair,
And there broods on his face a look of care
While he groans and wails and tears at his hair.

"Alas ! and alas ! and alack !" he cries ;
"Surely fortune and fame would both arise
If Old Ethics would let me advertise."

At last a bright thought comes into his brain ;
Says he : "I must try that old racket, 'tis plain ;
It worked O. K. once, and I'll work it again."

He wrote half a page on the "Evils of Pork,"
And the case of a man who swallowed a cork,
And a spoon and a knife but got stuck on a fork ;

Told how he cured an imprudent fellow
Who swallowed entire a gingham umbrella,
And brought it intact from the patient's patella.

The newspapers all extended their thanks ;
He opened accounts at the various banks ;
He'd bated with Ethics and caught all the cranks.

—*Printer's Ink.*

THE BRITISH GYNÆCOLOGICAL JOURNAL.

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THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MARCH 24, 1892.

PROFESSOR SIMPSON, PRESIDENT, IN THE CHAIR.

PRESENT : 43 Fellows and Visitors.

Mr. James Cooper was elected a Fellow, and Dr. Otto Engström, of Helsingfors, Finland, was proposed for election as a Fellow of the Society.

The President delivered his Inaugural Address.

The Marriage Question from the Standpoint of Gynæcology.

By Professor A. R. SIMPSON, M.D., President of the Royal College of Physicians of Edinburgh ; President of the Edinburgh Obstetrical Society.

GENTLEMEN,—My first duty in taking the chair to-night is to offer you, as I now do, my heartfelt thanks for the honour you have conferred upon me in choosing me to be President of the British Gynæcological Society. Young in years, the Society is already great in its achievements, and whilst the position in which you place me is one that any

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gynæcologist might deem it an honour to attain, the distinction is, on this occasion, all the greater that for the first time you have called for a President from beyond the Tweed. I am well aware that I am not the first Scotsman to occupy this chair. There are too many of my fellow-countrymen in this section of the empire to have made it possible for seven years to elapse in the history of such an institution without having one of them to head it. Since the James whom we call Sixth, and Englishmen call First, crossed the Tweed to put on the English crown, it has been the way of many of James Stewart's countrymen to cross that classic stream for good. Among the southward-wending pilgrims there have not been wanting distinguished members of our own profession, and representatives of our special department. To refer to only two of these, we see, about midway between James's time and ours, a Lanark doctor settling in London, not merely to practise, but to lay the scientific foundations of British midwifery and to show how the science and art should be taught; followed a little later by a younger practitioner from the same county, who carried on the work of observation and research, of instruction and illustration. They were friends and fellow-workers, and if in the rivalry of practice the younger outstripped the elder in popularity among the upper classes, it was not because William Hunter was possessed of more intellectual power or greater manual dexterity than William Smellie, but, as Hunter's French eulogist, in the "*Académie Royale des Sciences*" explains, Smellie "had not added to his talents the art of rendering himself agreeable to a sex which, accustomed to the language of flattery, is astonished to hear that of truth, even from the mouth of its physician, and which wishes that he would rather take trouble to please her than to cure her—a wish," he added, "that is doubtless excusable, seeing that the faults of women are the work of men." In their day the gynæcological section of our subject was completely overshadowed by the obstetrical, as the whole had been but a short while previously differentiated from general medicine and surgery. But when the time had come

in the mighty progress of our art, that you did well to mark by instituting this Society, the northern members were not surprised to see among its earliest presidents a fellow-countryman whose abilities have won for him a prominent place among the successors of Smellie and Hunter, though the centre of his activity lies not in London but in Birmingham.

The temptation is near on this occasion to try to sketch what gynæcology has owed to Scotland and to Scotsmen. Were I to do so, however, I should have to make such special mention of one particular name as might seem indelicate in one who is near of kin; and I only allude to it now to express the belief that I do not misinterpret your mind if I recognise in the compliment you pay to me a tribute to the memory of Sir James Young Simpson, and a token of your admiration of his worth and work. It enhances to me the pleasure of the position to be able to make this recognition.

CONJUGAL RELATIONS.

If obstetrics long overshadowed and kept to itself as a sort of appendage the diseases of women, it was fortunate for the subsidiary section, when it began to assume the proportions of a complete department, that it took to itself the designation of Gynæcology. This convenient and comprehensive term calls us to the study not only of morbid processes in individual women, but of all that concerns the well-being of the sex. So I propose to direct attention now to the conjugal relations, for in all our treatment of women's diseases we have it in view, immediately, or more remotely, to render them capable of their highest function of motherhood.

It is the more necessary for gynæcologists to consider the subject, that in recent times it has been freely treated of in all kinds of newspapers and magazines by writers of all varieties of mind. A year or two ago one of the daily papers intimated that it had received as many as 27,000 letters from various correspondents on the marriage question.

When the laity are venting all sorts of ideas, derived from sources that range from supernatural revelations to animal instincts, the trained physician may well be expected to express the opinion that will correspond to the result of scientific observation and philosophical reflection. This may especially be expected of the gynæcologist, for in the process of reproduction the *rôle* of the female is of higher import than the *rôle* of the male, and it belongs to him to consider under what conditions she may fulfil the function with greatest safety to herself, and with best hope of producing a numerous and healthy offspring.

"No excuse is needed," says Darwin, in dealing with the effects of sexual selection, "no excuse is needed for treating this subject in some detail; for as the German philosopher Schopenhauer remarks, 'The final aim of all love intrigues, be they comic or tragic, is really of more importance than all other ends in human life. What it all turns upon is nothing less than the composition of the next generation. . . . It is not the weal or woe of any one individual, but that of the human race to come, that is at stake.'"

The union of the sexes that causes impregnation comes about under the impulse of a mutual attraction so strong, that the great naturalist whom I have just quoted, in the application of the principle of sexual selection to evolution, is led to "the remarkable conclusion that the nervous system (the medium of appreciation of sexual pleasure) not only regulates most of the existing functions of the body, but has indirectly influenced the progressive development of various bodily structures and of certain mental qualities. *Courage*," he says, "pugnacity, perseverance, strength and size of body, weapons of all kinds, musical organs, both vocal and instrumental, bright colours and ornamental appendages, have all been indirectly gained by one sex or the other, through the exertion of choice, the influence of love and jealousy, and the appreciation of the beautiful in sound, colour or form, and these powers of the mind manifestly depend on the development of the brain."

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This passion, so potent in the propagation if not in the production of the race, we ask first, Is the gratification of it a necessity for any individual? And Physiology answers, No. This is not an appetite, like that of hunger or thirst, which must be satisfied else the individual will starve and die. In its development it is correlated, not with the maintenance of the individual, but with the multiplication of the race. To gratify the appetite apart from the correlated function is not natural, but morbid. When, for instance, the historian tells us how the Duke of Alva set out to crush the Netherlands with an army of ten thousand picked veterans, escorted by two thousand prostitutes—four hundred on horseback like princesses, and others on foot, but also well got up—we see we are in a sphere where physiology is shut out, and pathology holds all the field. The possession of the great inhibitory apparatus within the cranium of man, which distinguishes him from brutes, demands that the extended convolutions of his cerebrum shall not be disturbed in their circulation and activities by the flushes of his ganglionic centres, but shall hold these in control, and guide them as reason directs for the attainment of their proper end. It is only when the lower is duly regulated by the higher spheres of the nervous system that the normal development of the individual progresses, and that when maturity is reached the bodily vigour is maintained and the conditions established for propagation of a healthy race.

CELIBACY UNPHYSIOLOGICAL.

It is of importance here to remember that the condition of celibacy is not favourable to the health of communities or of individuals, the interesting and valuable statistics furnished by Bertillon in his article on Marriage in the *Dictionnaire Encyclopedique des Sciences Médicales* bringing this out in various points of view.

1. *Mortality* is higher among the unmarried than among the married. The tables in which Bertillon demonstrates the

depreciation of the insurance value of the lives of the unmarried as compared with the married are drawn not only for France, but also for Paris, for Belgium and for Holland. For England and Sweden he could not obtain the proper data. The figures in the various columns of his extended table are so closely confirmatory of the general results, that it will suffice to look at the French table of the mortality of both sexes at different ages, as that is affected by their being on the one hand bachelors, husbands, widowers, or, on the other, spinsters, wives, widows.

Proportion of Deaths per 1,000 at different ages of the unmarried, married and widowed.

Ages.	Bachelors.	Husbands.	Widowers.	Spinsters.	Wives.	Widows.
15—20	6.89	51.32	774.	7.53	11.86	12.31
20—25	12.88	8.92	49.6	8.32	9.92	23.62
25—30	10.17	6.24	21.84	9.02	8.98	16.9
30—35	11.51	6.82	19.17	9.87	9.36	15.03
35—40	13.15	7.52	17.50	10.87	9.29	12.73
40—45	16.62	9.55	18.89	13.28	10.14	13.30
45—50	19.60	11.47	22.2	15.71	10.69	15.20
50—55	25.8	15.61	26.8	20.97	14.11	18.71
55—60	32.1	21.5	34.17	26.90	19.29	24.47
60—65	45.92	32.6	47.5	40.52	30.75	37.07
65—70	58.5	44.8	62.97	58.3	45.3	53.5
70—75	85.1	71.5	95.4	85.5	72.67	86.1
75—80	123.	114.5	143.9	140.5	109.4	126.7
80—85	202.7	182.8	221.8	222.5	172.5	198.
85—90	268.4	228.6	263.05	305.	205.1	264.
90—95	282.	279.	319.	314.1	256.3	308.
95—	480.	357.	385.	387.7	416.	324.

These figures give us the proportion of deaths per thousand of the several groups at successive quinquennial periods of life. If, for the moment, we leave out of sight the deaths in the first quinquennium, where the individuals were under 20 years of age, we observe that the mortality of the central group—the married people—is markedly less than the mortality of the group on either side. This is more distinctly seen in the case of the men, among whom, between the ages of 20 and 25, there is a mortality of 12.88 per thousand among bachelors and 49.6 among widowers, and only 8.92 among

married men. The difference is still more striking at a more advanced period of life, as between the ages of 40 and 45. At that age there is a mortality among married men of 9.55 per thousand, whilst among bachelors the mortality amounts to 16.62, and among widowers to 18.89 per thousand. It can, as Bertillon further indicates, be put in another form. If we take the numbers in a community that at a given time would furnish 100 deaths among the married men, and ask what is the mortality among the same number of bachelors and of widowers, we find that for 100 married men who die between the ages of 30 and 35, there die of bachelors 169 and of widowers 281. Between the ages of 35 and 40 the proportion is 175 bachelors and 233 widowers to 100 married men; between 40 and 45, 174 bachelors and 198 widowers; between 45 and 50 the figures become 171 and 194; between 50 and 55, 165 and 172. The figures show that among bachelors there is a rise in the relative mortality till between the ages of 35 and 45, after which it gradually declines.

The influence of celibacy in the female sex is not at once so striking, though if we except the two earliest ages—all those under 25—we recognise that the conjugal union gives more favourable life prospects than spinsterhood. At the age of 45 to 50, *e.g.*, while the mortality among a thousand married women is 10.69, among a thousand spinsters it amounts to 15.71, and amongst as many widows to 15.20. Where a given number of wives at that time of life would furnish 100 deaths, the same number of unmarried women would yield 131. That the difference in the mortality of women at the earlier ages does not show so much in favour of the life-chances of married women is due to the mortality of parturition, and especially to the higher mortality of first labours.

The result of Bertillon's statistics is to show that the conjugal association, provided it is not prematurely entered on, is salutary to both sexes, though it is the husband who benefits most from the union. The dangers of child-bearing neutralise its benefits to the female up to the age of 25 in

France, and in Belgium and Holland even up to the ages of 40 or 45. "The comparison," he says, "of the vitality of married women and widows above the age of 50 with that of spinsters is very significant. It shows that the dangers of maternity are not prolonged beyond that time of life. A woman who by celibacy has deprived her organs of their special function, who has denied to her youth the pleasures of love, and the labours and joys of motherhood, has not thereby insured her old age against the dangers peculiar to it, but on the contrary, she remains more exposed to them. Love and motherhood, in the salutary conditions of marriage, far from exhausting vitality, preserve and protect it in the present and in the future, because in France the mothers of families, wives or widows, at every period of their existence, after the age of 25, pay a smaller tribute to death than the spinsters of corresponding age."

There are other directions in which it can be shown that those who enter on the marriage relation fare better than the unmarried, as for instance, when we look at—

2. The influence of marriage on the *tendency to suicide*. One might expect, as Bertillon says, "that family burdens, cares and miseries, disappointments and infidelities, would necessarily go to aggravate the part that the married must pay to this redoubtable fatality, and that the care-free and egotistic celibate must have the advantage as regarded suicide." But here, again, his statistics tell in favour of the married, for they show that among a million people in a year, there are 173 suicides among the unmarried to 154.5 among the married; or, to put it in another form, the population that in a given period would furnish 100 suicides among the married, would yield 112 among the unmarried.

3. The relation of marriage to *insanity*. The same statistician shows that marriage seems to exert a preservative influence against the development of insanity, when he finds that among ten thousand people, the proportion who become insane among the married is only 2.02, against 3.68 among the unmarried and 3.1 among the widowed. In this instance

it is especially the female sex that is benefited, for among men the proportions are 2.17 for husbands, against 3.95 for bachelors and 3 for widowers, while among women the figures are 1.9 for wives, against 3.4 for spinsters and 3.13 for widows.

4. The relation of marriage to *criminality*. He has besides drawn up a table to show the influence of the marriage state on the proclivity to crimes of all sorts, against person or property, from which it appears that if the number of unmarried criminals be taken at 100 at a given time, the proportion among the married would be 49.25 accused of crimes against the person, and only 46 instead of the 100 accused of crimes against property. Here, also, it is women who derive the greatest benefit from the civil institution. The number of inhabitants that would yield 100 husbands accused of crime would give 170 bachelors; whilst the number that would yield 100 wives thus accused would give 240 spinsters. "From this point of view," says Bertillon, "if woman is to attain the degree of moral perfection of which she is capable, she has even more need of marriage, of conjugal reason, than man."

When such statistics are before us we are prepared for an outburst like this from Thulié (*La Femme*), who writes from a purely natural history and evolutionary stand-point, in dealing with the question of voluntary sterility, and asks: "This sterility, which is a shame in the eyes of men who obey natural instincts, and a glory for the ignorant metaphysicians of Christendom, what is it for modern sociologists who base their doctrines on the knowledge of man and not on revelation?" and he answers, "From the point of view of the individual it is an infirmity; or if the sterility be really voluntary, it is a fault which deprives the human being of joys the most profound and pure, and removes at the same time the most powerful impulse to exertion and activity. From the point of view of society it is for the races affected by it a fatal decrepitude, and after the lapse of a longer or shorter period their disappearance before the strong and prolific races.

From the point of view of humanity it is a danger, or at least a delay, in the progressive evolution of the race." At any rate we can see that those who try to evade the laws of physiology, which require the multiplication of the race, do so under penalties such as nature teaches us always to expect to follow any rebellion against her laws.

PHYSIOLOGICAL CONDITIONS OF MARRIAGE.

Passing on to discuss the "physiology of marriage," we must examine the effects of different customs (1) in respect of fertility, and (2) in respect of the offspring. If we try to find out what we should regard as the normal physiological condition of conjugal union, we must look at the various methods that have received the sanctions of law or custom in different races, and note which gives the greatest security—*first*, for fertility, and, *second*, for the life and development of the products of the union. There are other secondary social and moral results, and there are also consequences of the different forms of union to the individuals concerned, which would all have to be taken into consideration in a wide survey of the subject. But we confine our attention now to those aspects of it which fall within the necessary study of the physiologist and the gynæcologist.

COMMUNAL MARRIAGE.

Of all the methods that have been sanctioned or proposed for the propagation of the race, the worst is that which has been designated the "communal" or "promiscuous" or "free-love" union of the sexes. Westermarck, in his recent elaborate work on the "History of Human Marriage," tries to prove that no such custom prevails or has prevailed, though Lubbock, Bastian and many others had formed the hypothesis that such had been the case with primeval man. But then his eagerness to establish his own hypothesis—that we derive our origin from monogamous apes—leads him to minimise the evidence on the other side; and even if it be,

as he maintains, a divergence from the archaic custom, something very like communalty prevails among North American Indians and South Sea Islanders, where it is seen to eventuate in the sterilisation of the women and death or destruction of the infants. So that Thulié says of it, "Children are scarce where the man is only a fertiliser." The mischief of it is seen nearer home in the promiscuity of abandoned women. Were London decimated, no physiologist could expect, as no philanthropist could wish to see its ranks filled up by the offspring of its eighty thousand prostitutes. "Il ne pousse pas d'herbe dans les chemins où tout le monde passe," says Bertillon.

POLYANDRY.

Polyandry is perhaps not far removed in its deleterious effects from communalty. It is said to prevail in some poor regions, as in Thibet and among the Esquimaux, where the co-associates are usually brothers, the eldest of whom chooses a wife for the party. This kind of union is incompatible with fertility. The woman may be mistress of a household, but she has all the responsibility, trouble and fatigue of the management, and when she dies in childbed, or soon after, the child so often perishes that the custom has grown up among some polyandrous people of burying with the dead mother the child that has not arrived at the stage of development when it can feed itself.

POLYGyny.

Polygamy, or rather polygyny, though a distinct advance on polyandry, is still, when measured by the rule we are applying, an unphysiological institution. The women of the seraglio are nowise fertile. The master may be the father of many children, but the individual wives have relatively few; and hence it is found that the birth-rate in polygynous countries is inferior to that of the populations where monogamy prevails, while the infantile mortality increases. There is thus a tendency to diminution in the numbers of poly-

gynous populations, who are often warlike in character, and keep up their supply by raids on neighbouring tribes or by the purchase of slaves.

MONOGAMY.

Bertillon defines marriage very fully as "a synallagmatic (mutually consenting) and authentic (openly acknowledged) contract to constitute a family, by which the pair, besides the sexual relations, assure each other of community of life, of effort, of interest and of conscience, with the view of mutually providing society and material and moral support, and of securing the proper upbringing of their children." It is in such a monogamous union—in obedience to the law of "one with one, mutually consenting and openly contracting"—that we find the surest guarantee for the maintenance and multiplication of the race. The products of such a union are more numerous; they are healthier; they have better chances of being reared successfully. This will come out more clearly if we look at some of the consequences of infraction of this great law. Some of these consequences may fall on either of the individuals who break through the fence that nature has set around the procreative processes. But we concern ourselves here with the consequences to the female.

DANGERS OF INFRACTION OF LAW.

We ask, what are the risks of a woman yielding herself to a seducer, *i.e.*, to a man who has not openly declared his readiness to assume marital responsibility?

(1) She may become tainted with *syphilis*. Of course this might happen to a woman formally married, who had not been careful to insure herself against damaged goods in the making of her bargain. When the day comes for the righting of the wrongs of women, the law will do something to protect her from this injury, or compensate her where it has been inflicted on her innocence. Assuredly, if it had been the rule to have this disastrous element introduced into the marriage contract by the wife, instead of being, as is the case,

the rare exception, we men would long ago have found legal means of freeing ourselves from partners whose condition was a danger to us and to our offspring. However this may be, the unmarried woman is in danger of infection, whether by inoculation from a primary sore, or transmission through a tainted ovum; and how mischievous the syphilitic virus is in aggravating many female disorders, and in lessening her powers of reproduction, is but too well known to every general practitioner.

(2) She may contract a *gonorrhœa*. Up till a recent period this would have been regarded as a comparatively trifling ailment; and in some text-books on surgery it is still too slightly dealt with. But since Noeggerath published his remarkable pamphlet in 1872, on "Latent Gonorrhœa," gynecologists have become more and more alive to the pernicious effects of this often insidious malady; and Professor Sinclair and others have shown its virulence in initiating some of the most painful and protracted illnesses of women, and in leading, all too often, to their hopeless sterilisation.

(3) She may become *pregnant*. Escaping the pathological risks of illicit intercourse, the physiological result may follow and she finds herself impregnated. There is no time at which she can be sure that conception will not follow the insemination. If she counts on an agnetic period she may be mistaken; if on preventive measures, they may fail her; and that which to her married sister brings the brightest hope, befalls her as the darkest dread.

In her unsheltered, solitary state, the ordinary dangers of pregnancy and parturition and the puerperium are all aggravated by many degrees. The woman who has become impregnated within the physiological limits is surrounded with all the guarantees for health and safety. She has a nervous system that is calm, or subject only to the exhilaration of anticipated joy; her circulation goes on steadily, or is healthfully stimulated at times to more activity; food, clothing and every comfort are at her command; she can give due attention to the state of her emunctories. On the other hand,

nervous depression; circulatory disturbances; imperfect food and clothing, and frequent contradiction of the ordinary conditions of health, are the lot of the woman to whom pregnancy has come outside the limits. Hence the tendency to melancholia, to convulsions and other grave disorders of gestation, and the risks of a higher child-bed mortality; and where her life is spared she is more likely to come out of her lying-in room the subject of disease or damage that may be a source of life-long trouble.

Then when we turn to consider what the chances are to her infant, we see that the risk is great of its being still-born, or that it may be delicate and difficult to rear. In France the difference between the still-birth-rates respectively, of legitimate and illegitimate children, is enormous. According to Bertillon the proportion is as 100 to 193. Transgression of the law that requires open recognition of the union between the parents almost doubles the mortality to the progeny at birth. If we follow the fate of the living children born of unmarried women, we find that whilst in 1,000 legitimate births 35.12 of the infants die in the first week, in 1,000 illegitimate births 63 of the infants die within the week. Within a month the mortality among legitimate children amounts to 74.7 per 1000, amongst illegitimate to 170 per 1,000: and while the legitimate children have a mortality of 175 per 6,000 in the first year after birth, the mortality of illegitimate children within the same period is 337 per 1,000.

The subject has been pursued further by Thulié, in tracing the deleterious influence of bastardy on the child and the adolescent. But gynæcology has regard only to the woman and her nursling, and looking simply at the dangers that overshadow her and it when conception occurs without the marriage bond, we can see that this natural law, stern as it seems, is like all nature's other laws, beneficent in its operation when it demands that any pair who propose to unite for the propagation of the race should make known their intention, and should thenceforth keep themselves for each other and for no other. Obedience to this law, and nothing else,

will banish syphilis and gonorrhœa ; it will lessen the sufferings of pregnancy, which have sometimes been likened to a prolonged disease ; it will diminish the dangers of the lying-in-room, which may be fatal as a battle field ; it will reduce the mortality of infants at birth and in the early periods of infancy ; and it will lead to the production of children that will not only live and survive, but that are capable of higher stages of development. The French anthropologist whom I have last referred to, avers " that the more that races become elevated, the more that individuality increases, and the more that the monogamic knot becomes securely tied—not only by the force of laws, but especially by the influence of custom—the more also will woman become more fertile in the large sense of the term—that is to say, the children whom she bears will have an ever-increasing physical vigour and intellectual capacity."

It is no new ground we enter on in dealing with this great theme. Long ago, in the time of Nero, a Roman stoic indicated the true position in which the philosopher should stand. This Caius Musonius Rufus, maintaining that the same training and education must be suitable for both sexes, and applying his principle of equality to sexual relations and to marriage, argued that what was wrong in a woman was equally wrong in a man, or rather was more disgraceful to a man, inasmuch as he claimed to be a stronger being, and therefore more capable of controlling his passions. He urges that the whole of civilisation rests upon the institution of marriage. " For," says he, " the man who takes away marriage from the human race, takes away the household, takes away the State, takes away the human race."

To have determined the kind of marriage relation that is most conducive to successful propagation does not, however, exhaust the duty of the gynæcologist, who is consulted as to the best conditions under which the relation may be entered on. He has to consider further, *e.g.*, the questions of—

(1) The marriageable *age*.—Now in regard to this point, if we turn again to Bertillon's table, showing the relative mor-

tality per thousand at different ages of the single, the married and the widowed, we can see that the relation of the figures in the first line, especially in the case of men, presents a striking contrast to the figures in all the lines that follow. The ages of the individuals in that first line run from 15 to 20. At all the ages beyond, as we have already seen, the marriage relation exerts such a favourable influence on the life conditions that the mortality among the married men is far below that of the bachelors. But, on the contrary, when marriage is entered on before the age of 20 it has a prejudicial influence on life, and whereas the mortality among *unmarried* youths between the ages of 15 and 20 is only 6.89 per 1,000, those who marry under 20—usually between 18 and 20—die at the rate of 51.32 per 1,000. Where among the unmarried youths the mortality is only 14, among the married it mounts to 100. Bertillon believes that the beneficial influence of marriage which is so marked at the age of 25 and upwards, is “still considerable” at 24, “still manifest” at 23, perhaps “still sensible” at 22; but would cease at 21, and be replaced by an aggravated mortality at 20. “Who can object,” he asks, “to the conclusion that these early marriages are deadly, that the law which permits them is a snare which the ignorance of the legislator has spread for our youth, and that this bad law should be abrogated”?

The danger of early marriage is not so pronounced in the case of women, and the beneficial influence does not begin to show itself so early as in men. The table shows us that the proportion of deaths per thousand for the unmarried between 15 and 20 years of age is 7.53, and for the married at the same age 11.86. There is already an improvement between the ages of 20 and 25, at which the mortality among the unmarried is 8.32, and among the married 9.92. It is the dangers of parturition, and especially of first labours, that keep up the mortality among married women during their reproductive life; but we can see that these dangers become attenuated as they advance in years, and the figures show us very distinctly how specially dangerous it is to enter prema-

turely on the reproductive career. Whilst the relative mortality of spinsters and married women between the ages of 20 and 25 is as 100 to 119, their relative mortality between the ages of 15 and 20 is as 100 to 158 in France. The proportion in Holland is as 100 to 208, so that there a young woman marrying before the age of 20 doubles her risks of death. When we know besides that the products of these early marriages are apt to be more feeble and difficult to rear, and that women who marry early are likely as a rule to have fewer children, we conclude that it is not advisable for a woman to contract a marriage before the age of 20. In general terms we may say that after an individual has passed the first septennium of life, and has got the permanent teeth, during the second septennium the building up of the system goes on which prepares for the evolution of the sexual apparatus. This occupies the third septennium, so that it is only at the age of 20 or 21 that the pelvic organs with the associated mammæ are fairly ripened and capable of carrying out their proper function. And as it has required all these years for the full physical development of the woman, so in her psychical training we cannot expect of her at an earlier period to be able clearly to apprehend the relations on which she is entering, and intelligently to face the lofty requirements of motherhood. Of course in all these data we speak of averages, and in the corporeal and mental development of women we may find diversities in the dates of their completion just as there are differences in the date of the eruption of the first teeth in infancy, which we usually look for at the seventh month, though in some infants they appear earlier, and in others later. So we may meet a wise and well-developed woman of 18, whose marriage we might conscientiously sanction, whilst we might have grave doubts as to its propriety with a giddy girl of thirty. "In Woman," says Matthews Duncan, "the age of maturity is 20 to 25; in men it is later, probably by at least five years, and you will pardon the interpolation here of the reflection, well worthy of being fully dwelt on, that this late ascertained physiological law

tallies with the old and wisest counsels as to the nubility of men and women—a part of the grand subject of morals and medicine. At this age a woman has the lowest risk of sterility, the greatest likelihood of having healthy children that will long survive, the greatest likelihood of herself surviving child-birth, the lowest risk of having abortions, of having excessive family, of having plural pregnancy, and of bringing forth idiots.”

It is not only in the ill effects on the individuals that the mistake of premature reproduction appears, but also in the imperfect development and low vitality of the products of such unions—evils that show themselves in modified forms, again, in the children of those too advanced in life. The differences of the two classes are summed up by Dr. Strahan in his recent work on “Marriage and Diseases,” as follows :—“The children of *immature* parentage are specially liable to death during infancy from wasting, scrofulous and convulsive affections. They are liable, in a remarkable degree, to idiocy and imbecility of a low type, and to physical deformities and imperfections. Large numbers of them succumb to tubercular disease about the age of puberty and adolescence, and few of them attain even advanced middle age. The genital organs are ill-developed and often deformed, and a great number of them are sterile. They are also notorious for their lack of energy and courage—hence the class of criminals to which they give the greatest number of recruits is that of thieves and other petty offenders. The children of the *senile* are, as a class, ugly, small of stature, stooping, which, together with the absence of subcutaneous fat, gives them a look of old age while still young. Idiocy is less common amongst them than weak-mindedness amounting to imbecility, which is often accompanied with more or less perversion of moral feeling, and a plentiful supply of deep, low cunning. Many of them die between the ages of puberty and adolescence of tubercular disease, few of them live past middle age, and great numbers of them ultimately become insane and criminal. They are nervous, irritable, passionate

and horribly cruel, and are the perpetrators of most of those fiendish barbarities the recital of which, from time to time shock the civilised world."

(2) Physical bars to marriage.—Besides the determination of the age of nubility, it belongs to the gynæcologist to consider what physical conditions are to be regarded as contra-indications to the marriage relation. Regularity of menstrual flow may usually be taken as a sign of fitness for procreation, though it may consist with morbid conditions, such, for example, as deformities of the pelvis, that would render the process dangerous to both mother and child, and that would make it inadvisable for the affected individual to marry. The irregularity or absence of the flow ought always to be taken note of as a possible indication of the presence of some condition that will inevitably cause an infertile union. Some of the associated conditions may be remedied, such as an imperforate hymen ; but we have all seen cases where the marriage knot should never have been tied, of congenital atresia vaginæ, or infantile, or otherwise imperfectly developed uterus, and the fruitless union has been a mutual disappointment. From such distress the gynæcologist could, in almost every instance, save the parties, if only people were taught enough of physiology to understand the circumstances that ought to lead them to seek his counsel. Besides the malformations of the generative apparatus, there are other organic defects or constitutional tendencies that ought to make our patients pause before they encounter the risks of reproduction. Dr. Robert Barnes has repeatedly, with characteristic lucidity and vigour and with abundant wealth of illustration, demonstrated how searchingly a pregnancy will test the vital powers of women, calling out latent tendencies, aggravating already existing disorders, and adding an element of danger to otherwise trifling maladies ; and there are some of these—such as a recently acquired incompetency of the cardiac valves, especially the aortic, in which to withhold a warning as to the dangers of pregnancy and parturition would be a downright cruelty.

In regard to this matter, also, we have not only to keep in mind the consequences to the wife, but to anticipate the influences on the offspring. This opens up the wide field of heredity, which bids us remember that a woman who is the subject of some infirmity may not only suffer herself in the reproductive process, but may transmit her weakness to her children. So great is this risk in the case of mental disturbances that Maudsley has said, "If we are seriously minded to check the increase or lessen the production of insanity, it would be necessary to lay down rules to prevent the propagation of a disease which is one of the most hereditary of diseases." Strahan insists that "All men and women who have been insane once and have a bad family history, those who have been twice insane, even if the family history be good, and all who are confirmed epileptics or drunkards, should be prevented by the State from becoming parents; for," he maintains, "they have no greater right to carry suffering and contamination amongst the people, and throw expense upon the State, than has the person suffering from small-pox to do so by travelling in a public conveyance." It is not only in the aggravation and propagation of neuroses, such as insanity, epilepsy, drunkenness, idiocy, deaf-mutism, and such like, that we see the ill-effects of injudicious unions. They are seen also in the transmission of dangerous diatheses, such as the cancerous, tuberculous, syphilitic and rheumatic, which are apt to determine the production of children puny and prone to death, all the more if the parents have any close degree of consanguinity, or if they are both in any marked degree the subjects of the diathetic influence.

(3) Regulated marital intercourse. The gynæcologist has to consider not only what may be the proper age for entrance on the reproductive career, and the physical conditions, local or constitutional, that may be an embarrassment or even an actual bar to the process, he has to be ready to indicate the conditions under which it may be healthily carried out. According to Herbert Spencer, the progressive evolution of

the race proceeds under the varying influences of what he speaks of as individuation and genesis. In the former term he includes all the race-preservative processes by which individual life is completed and maintained; in the latter the processes that go to the formation and perfecting of new individuals; and he shows that individuation and genesis vary inversely—genesis decreasing as individuation increases, but not quite so fast, so that progressive evolution in the direction of individuation is associated with a diminishing rate of reproduction. This might at first sight seem to sanction the idea that the married pair might be encouraged to rapid reproduction for the multiplication of the family. But we have to keep in mind what has been indicated by Geddes and Thomson in their remarkable work on "The Evolution of Sex" that "the survival of a species or family depends not primarily upon quantity, but upon quality. The future is not to the most numerous populations, but to the most individuated." This consideration suggests to us the warning that the pair who would build up a family must see to the production not of many children but of a moderate number of children, who are more likely to be healthy, and for whose upbringing they are more likely to be able to provide. The experience of every physician must confirm the authors I have just quoted, when they deem it "essential to recognise that the ideal to be sought after is not merely a controlled rate of increase, but regulated married lives. Neo-Malthusianism might secure the former by its more or less mechanical methods, and there is no doubt that a limitation of the family would often increase the happiness of the home, but there is danger lest, in removing its result, sexual intemperance become increasingly organic. We would urge, in fact, the necessity of an ethical rather than of a mechanical 'prudence after marriage,' of a temperance recognised to be as binding on husband and wife as chastity on the unmarried. When we consider the inevitable consequences of intemperance, even if the dangers of too large families be avoided, and the possibility of exaggerated sexuality becoming cumu-

lative by inheritance, we cannot help recognising that the intemperate pair are falling towards the ethical level of the harlots and profligates of our streets."

THE DIM AND DISTANT FUTURE.

Gentlemen, if William Hunter's eulogist was rather gallant than absolutely accurate in saying that "the faults of women are the work of men," there is enough of sober truth in the averment to suggest to us the obligation that lies on us as men as well as gynæcologists, to do our utmost to mitigate the ills that come to women so often from their submission to the stronger sex. As this Society has already done good service in the discovery of means to recognise and remedy the diseases of women, so we are confident it will continue and extend its beneficent operations. But gynæcology and gynæcologists will only have rendered full service to their subject when they have secured such intelligent apprehension of the laws that regulate the physiology of reproduction, and such implicit obedience to these laws, that a race shall have been evolved that will be independent of their aid. The time is long and the way far to such a consummation, but our Society and we ourselves shall only achieve our best while we keep steadily in view the highest of ideals.

Dr. ROBERT BARNES proposed a vote of thanks to the President for his able and most interesting address.

Dr. ROUTH, in seconding the vote of thanks, said he thought the Society had reason to feel much obliged to Professor Simpson for his highly eloquent and instructive address—a history for gynæcologists of great value and interest. To him, especially, it had been very gratifying to find that the views brought out by the French statistics quoted, confirmed conclusions exactly analogous to those enunciated in a paper by himself on "Procreative Power" published in the *London Journal of Medicine*, years ago. His (Dr. Routh's) paper proved the several points by recourse to higher mathematics. But, much as he admired Professor Simpson's paper, he was afraid few ardent lovers would allow reason to preclude the

marriage of diseased persons. We had not yet reached that acme of common sense. Nevertheless, Professor Simpson's address was excellent in all its details, as well as worthy of this Society, which therefore owed him its very best thanks.

The vote of thanks was accorded by acclamation, and was briefly acknowledged by the President.

A Case of Ovariectomy in a Patient 72 years of age. By
FANCOURT BARNES, M.D., Physician to the Chelsea
Hospital for Women.

THE cases in which ovariectomy has been performed on patients over 70 years of age are not numerous. In his work on "Surgical Diseases of the Ovaries and Fallopian Tubes," Mr. Bland Sutton has collected twenty-two cases in which the operation has been performed on patients over 70 years of age. As this table is recent I have thought it of interest to quote it in full. (See page 161.)

The case which I am about to record was one in which I successfully removed an ovarian cyst from a patient aged 72 years, and which was complicated by inflammation of the parotid gland three days after the operation. Mrs. P—, aged 72, sent up for operation by Mr. Edgar Hunt, of Colchester, had noticed a tumour growing for two years. On examination by Dr. Robert Barnes, Mr. Knowsley Thornton and Mr. Edgar Hunt, the presence of an ovarian cyst was diagnosed. On January 27th, 1892, I proceeded to operate and removed an ovarian cyst containing one gallon of fluid, and three and a-half pounds solid matter. There was a broad pedicle, and there were no adhesions. The abdominal incision, four inches in length, was closed with silver sutures. Chloroform was administered. The operation occupied twenty-two minutes. The patient had no unusual symptoms until the third day after operation, when a hard inflammation of the left parotid gland set in. This did not give rise, however, to any marked distress. The abdominal wound had healed by first intention, and there were no signs of any

mischief in the abdomen. The temperature rose to 101.8 but fell to normal on the following day. On February 1st an incision was made into the parotid gland in order to determine the presence of pus, but there was none. The inflammation quickly resolved itself without any suppuration. On February 4th the stitches were removed. The patient returned home quite well five weeks after the operation. This case presents two points of interest: Firstly, the advanced age of the patient; secondly, the inflammation of the parotid gland, which occurred and resolved without any symptoms whatever of septicæmia or pyæmia. Cases of inflammation of the parotid gland after abdominal operations have been recorded from time to time, but no satisfactory explanation of this condition has yet been given. In a paper on "Parotitis after Injury, or Disease of the Abdomen or Pelvis," by Mr. Stephen Paget, read before the Medical Society in 1887, 101 cases are collected. In this paper Mr. Paget called the attention of the Society to a sequence of great interest—the inflammation of the parotid gland which follows injury or disease of the abdomen or pelvis. "Of this form of parotitis," he said, "I have collected 101 cases. Of these 101, 10 were due to injury or disease of the urinary tract, 18 were due to injury or disease of the alimentary canal, and 23 were due to injury or disease of the abdominal wall, the peritoneum, or the pelvic cellular tissue. The remaining 50 were due to injury or disease, or temporary derangement of the generative organs. By 'temporary derangement' I mean slight injuries or natural processes—a slight blow on the testicle, the introduction of a pessary, menstruation and pregnancy." Mr. Paget further remarks that:—"The onset of this form of parotitis varies much as regards the general health. As a rule, there is no marked disturbance of it, no rigors, no high fever. Thus, in most of the cases of parotitis after ovariectomy, where any slight rise of temperature is mentioned, it is expressly said to be 'slight' or 'not marked.' In some, indeed, there seems to have been none at first; though, naturally, there is some feverishness during the course of the

inflammation. In conclusion, I venture to suggest a view of this form of parotitis, which seems to me in accordance with the evidence. We have seen that this parotitis after injury

Operator.	Age of Patient.	Result.	Place of Record.
Janvria	77	Success	<i>Am. Journal of Obstetrics</i> , vol. xvii., 1884, p. 171.
Bennet, of Connecticut ...	75	Success	<i>Brit. Med. Journ.</i> , 1861, vol. ii., p. 532.
Schroeder	80	Success	<i>Olshausen, Krankheiten der Ovarien</i> , s. 394.
Schroeder	79	Success	Ditto.
Wilcke, of Halle	77	Success	Ditto.
Fancourt Barnes	70	Success	<i>Prov. Med. Journ.</i> , 1888.
Sir Spencer Wells	70	Success	<i>Medico-Chir. Trans.</i> , vol. lx., pp. 224, 227.
Sir Spencer Wells	77	Death	
Thornton	70	Success	<i>Medico-Chir. Trans.</i> , vol. lxx., pp. 57, 64 & 75.
Thornton	71	Success	
Thornton	70	Incomplete operation. Death in 48 hours.	
Bantock	71	Success	<i>Medico-Chir. Trans.</i> , vol. lxiv., p. 128.
Meredith	70	Success	<i>Medico-Chir. Trans.</i> , vol. lxxii., p. 50.
Halliday Croom	70	Recovery	<i>Obstet. Trans.</i> , Edin., vol. xiv., p. 94.
Lawson Tait	70	Recovery	<i>Brit. Med. Journ.</i> , 1886, vol. i., p. 923.
Skene Keith	70	Recovery	<i>Brit. Med. Journ.</i> , 1887, vol. i., p. 271.
Skene Keith	75	Incision ; Drainage ; Recovery.	Ditto.
Homans	82	Recovery	<i>Brit. Med. Journ.</i> , May 3, 1888.
Owens, of Brisbane	80	Recovery	<i>Brit. Gyn. Journ.</i> , vol. iv., p. 88.
Keith, Thomas	73	Recovery	<i>Brit. Med. Journ.</i> , 1878, vol. ii., p. 592.
Davis	75	Recovery	<i>Brit. Gyn. Journ.</i> , vol. iii., p. 413.
Holland	76	Recovery	<i>Brit. Gyn. Journ.</i> , part xxvi., p. 179.

or disease of the abdomen or pelvis is in many ways a peculiar lesion. So far from being due to pyæmia, it was in 93 cases out of 101, an isolated lesion, unaccompanied by

any other inflammation like itself. So far from being developed at a regular interval after the infliction of the primary injury, we have seen that it has no fixed period of incubation, and runs no regular course. Its invasion is not marked, as a rule, by rigors, or by any great rise of temperature ; indeed, it seems in many cases to be what old writers called a 'critical' inflammation. It may subside, and swell up, and subside again ; or may recur with each successive pregnancy or menstruation. Out of thirty-three cases, where it was resolved without suppuration, only one died, and that was a woman with cancer of the sigmoid flexure, who died of the local disease a month after colotomy. These facts make it impossible for us to say that this form of parotitis is due to any ordinary form of septicæmia or pyæmia." Mr. Paget has since informed me that many more cases have been recorded since the publication of his paper, but that no additional light has been thrown on the causation of this form of parotitis.

Dr. EDIS related a case where the patient was aged 81—in her 82nd year—and looked old at that. When first seen in September, 1891, a semi-solid tumour was detected in the abdomen extending up to the level of the umbilicus, nearly central ; no fluctuation discernible.

On October 17th, ovariectomy was performed. On opening the abdomen a clear jelly-like fluid occupied the peritoneal cavity. The cyst itself contained thick colloid material, very tenacious, which had to be removed by the hand as it was too solid to flow through even the largest cannula. The peritoneal cavity was washed out with warm water, and a drainage tube inserted. The patient made a tedious but uninterrupted recovery, and is now, five months from the date of operation, perfectly well. Her medical man writes : "The abdomen is soft and resonant, and quite free from any local tenderness. She has gained in flesh, has a good appetite, and walks round her garden."

Dr. HEYWOOD SMITH said that in the absence of Dr. Fancourt Barnes he should like to ask his colleagues for some information about the condition of the patient—as to whether she had been recently married, either for a first or second

time ; for he had noticed that in cases where marriage had taken place after the menopause ovarian tumours had occasionally resulted, and he wondered whether it was that the ovaries being stimulated by the sexual act, and the time being past for the evolution of impregnable ova, the ovisacs had developed into ovarian tumours? He would also mention that some years ago he had operated on a woman over 70, and she had made a good recovery.

Dr. INGLIS PARSONS said that it was very necessary to recognise that simple parotitis might occur after any severe operation, and was not always a symptom of pyæmia. In Holmes' "System of Surgery," or at any rate in his edition, simple parotitis without pyæmia was not mentioned as an after-effect of operations, and the reader was led to infer that it always meant pyæmia—a condition attended with grave danger—whereas simple parotitis always ended in resolution.

Dr. W. D. SPANTON said he had seen instances of parotitis unconnected with affections of the reproductive organs, and in those cases which were due to septic infection suppuration was not uncommon, whereas he had never found it occur when the inflammation of the gland was of a purely sympathetic character.

Mr. REEVES said that epididymitis from various causes was common, but that parotitis was rare. He had seen parotitis after abdominal operations, and chiefly connected with the uterine adnexa, but knew of no satisfactory explanation, as neither metastasis, sympathy, nor an assumed septicæmia seemed scientific explanations in the present state of our knowledge, for no clear causal nexus had been demonstrated. The high temperature and rigors, when they occurred could be explained by local inflammation and suppuration in a gland bound down by tense fascia.

Dr. ROUTH said he did not think that, except when matter was found, we had any right to conclude that the parotitis was owing to septic poisoning after an operation, nor other than ordinary mumps which had occurred synchronously.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

TUESDAY, APRIL 28, 1892.

PROFESSOR SIMPSON, PRESIDENT, IN THE CHAIR.

PRESENT: 25 Fellows and Visitors.

Dr. Otto Engström, of Helsingfors, Finland, were elected a Fellow of the Society, and Dr. W. E. B. Davis, of Georgia, U.S.A., and Dr. W. J. McKay, of Sydney, Australia, were proposed for election.

A Case of Hydro-Nephrosis and Calculus of Right Kidney—Recovery without Operation—Subsequent Pyo-Nephrosis of Left Kidney, with Total Suppression of Urine—Nephrotomy—Removal of Calculus—Recovery—Followed by similar symptoms and operation on two subsequent occasions—Death seven years after first attack. By F. BOWREMAN JESSETT, F.R.C.S., Surgeon to the Cancer Hospital, Brompton.

L. S., aged 42, married, seven children.

Family History.—*Nil.* Admitted into Cancer Hospital, July 23rd, 1885.

History.—Two years prior to admission noticed pains in the right side and back, accompanied by sickness. Has received no benefit from treatment, although she has sought the advice of various doctors. First noticed a swelling in abdomen July, 1884.

Present State.—Tumour the size of a cocoanut is found to occupy the right side of abdomen, extending from the ribs above to the crest of the ilium below, filling the whole space as far forwards as a line drawn from the anterior superior spine of the ilium to the ninth costal cartilage. On examination, the

tumour felt hard, slightly irregular, not particularly painful or tender to the touch. Urine normal in quantity and clear. The patient complained of severe pain down the course of the ureter. The bowels had been confined. Copious enemata were administered with a view of emptying the colon, and thus clearing the way for a more definite diagnosis.

August 3rd.—The enemata have brought away a quantity of hard lumps of fæces, and the swelling has become considerably reduced in size, and continues to decrease. By careful examination of the urine at this time, a small quantity of mucus was detected. Otherwise healthy.

September 11th.—The patient has periodic attacks of sickness; suffers from pain in abdomen, shooting towards the bladder and down the right thigh. The tumour can now be felt distinctly beneath the edge of the liver—a hardish, painless mass, the size and shape of a large kidney. Diagnosis arrived at was—Calculus in kidney plugging ureter. Hydro-nephrosis.

October 23rd.—The patient was discharged. The left kidney at this time was normal.

March 20th, 1889.—(Four years have elapsed since the patient was discharged.) She was re-admitted complaining of pain in *left* loin, and states that she has passed no urine since the 18th of March. The abdomen is distended. She says on the 18th she was suddenly seized with acute pain in left loin and back, and vomited. This continued on and off till she came to the hospital.

Present State.—She was admitted and closely watched for twelve hours, and a catheter passed into the bladder, but there was evidently no urine passing into this viscus, and the diagnosis pointed to calculus plugging the left ureter and probable pyo-nephrosis. The tumour in the right side for which she was previously admitted had totally disappeared.

On March 21st I performed nephrotomy on the left side, and let out about ten ounces of pus and urine. The finger was passed into the pelvis of the kidney, which I thoroughly explored, but failed to find any stone. I introduced a large

drainage tube into the kidney, and stitched the kidney to the parietes with silkworm gut.

March 22nd.—Urine commenced to pass by bladder, a large quantity being discharged through the drainage tube in the wound, which was conveyed by a long india-rubber tube into a vessel containing solution of carbolic acid under the bed.

March 25th.—She had passed since the operation six pints of urine by the tube, and three pints by the bladder, passing three pints in twenty-four hours. On the fifth day after the operation, on dressing the wound, a small calculus about the size of a date stone was found in the dressing. The patient made a slow but steady recovery, and was discharged June 15th well, the wound being quite healed.

Five months later, viz., October 25th, 1889, she applied at the hospital, and was re-admitted, suffering from severe attacks of pain in the left side and total retention of urine. Catheter was passed, but nothing but a little pus escaped. Nephrotomy performed on same evening—a considerable quantity of stinking urine and pus escaped. I explored the pelvis of the kidney, and again failed to find a stone. I passed a probe some considerable distance down the ureter, but could detect no stone. The kidney was fixed to the wound in a similar manner as before. The pain was relieved at once by the operation, and on the seventh day afterwards she passed urine by the bladder. The urine contained a large quantity of pus and blood. She passed on an average fifty ounces daily.

December 18th, 1889.—Lumbar wound quite healed and patient discharged.

December 19th, 1890.—I saw nothing more of this patient until December 19th, 1890, when she was again re-admitted. She had remained quite well until August, when she noticed streaks of blood in the urine, bright, and settling thick at the bottom of chamber. This would disappear for a few days, and then come on again. Has had no pain until four days ago, since when she has occasional severe pain in lower part

of back and abdomen, accompanied with nausea. Micturition not painful. Has been getting very much thinner.

Present State.—The scars of the two previous operations are plainly visible, running parallel to each other and with the last rib. In the middle of the upper incision there is a tender spot, and a hard rounded swelling, movable, can be felt. Bowels very constipated; great lumbar pain; urine contains blood and pus; sound passed into bladder but nothing found; urine alkaline. Bladder washed out with solution of zinc; complains of great pain running down leg.

January 31st, 1891.—Very little blood in urine, and much less deposit.

February 14th.—Discharged at her own request much improved.

January 14th, 1892.—Patient re-admitted, complaining of great pain in left loin running down left leg; passes very little urine. There is a distinct fluctuating swelling in left loin, tender; urine, eighteen ounces, alkaline, $\frac{1}{4}$ pus.

January 23rd.—I performed nephrotomy by making incision extending from the top of the twelfth rib directly downwards, crossing the old cicatrices at almost a right angle. The kidney was at once opened and a quantity of stinking pus escaped; on introducing the finger a large stone was felt of the size of a large walnut, this was extracted with little difficulty, and the kidney further explored and washed out and drained as on previous occasions. The patient was greatly relieved by the operation, and passed on an average from thirty to forty ounces of urine by the tube, daily. She continued to improve for the first fortnight after the operation, but on February 6th she became very much weaker, and notwithstanding treatment she gradually sank and died on February 11th, eighteen days after the operation.

Post-mortem.—Body much emaciated; organs generally healthy. On removing the intestines and searching for the kidneys, the following state of things was found. The specimen I now show: The right kidney is represented by a mere cyst wall with just a trace of kidney substance. It con-

tained about an ounce of clear fluid. On tracing the ureter down towards the bladder, a calculus was found freely impacted at the lower part of the ureter, just at its entrance into the bladder. The bladder was healthy, and contained no stones. The left kidney was somewhat enlarged and the lining of the pelvis of the kidney was coated over with a phosphatic deposit, otherwise the kidney substance appeared healthy.

Remarks.—This case is, I think, of great surgical interest as well as physiological importance, as it is clear that until the first attack when the patient was admitted into the Hospital on July 23rd, 1885, both kidneys were performing their natural functions. At this time the calculus, found in the right kidney at the *post-mortem* examination, plugged the ureter, and so caused hydronephrosis, the pressure of the urine in the pelvis compressed the kidney substance and caused it to become atrophied and inactive, the urine collected in the pelvis became gradually absorbed, and the patient was left in a condition of a person with one kidney.

On some Cases of Ectopic Gestation. By JOHN W. TAYLOR, F.R.C.S. Eng., Surgeon to the Birmingham and Midland Hospital for Women, Consulting Surgeon to the Wolverhampton Hospital for Women, &c.

ON looking over my note-books and specimens it appears to me that my cases of extra-uterine pregnancy are worthy of more than passing notice. They have more or less decided bearing on some of the most vexed questions connected with this interesting subject, and I have accordingly chosen Ectopic Gestation as the subject of my paper this evening.

That ectopic pregnancy is almost always tubal in its origin and that it is liable to cause dangerous or fatal hæmorrhage from rupture of the tube are points too well established now to need confirmation or comment, but it seems to me that it has been too readily assumed that the sequence of tubal distension, rupture at a definite period, and

dangerous or fatal hæmorrhage consequent on this, is an almost invariable one. My own experience and observation of cases of extra-uterine gestation have been sufficiently extensive to teach me that there are few diseases the course of which can be more variable. With the exception of cases of early operation in which a ruptured tube has been removed before any trace of a foetus can be found, it is quite rare to meet with specimens in which the method of growth or extension has been strictly similar or directly comparable; and while full justice has been done to some ways of development such as that beneath or within the broad ligament, so well described by Drs. Hart and Carter, I am convinced that there are notable variations from this standard in advanced ectopic pregnancies, that need further study and elucidation.

It will probably still be some years before all the problems connected with this subject are fully settled. In the meantime the cases which I have to bring before your notice will illustrate some different phases or stages of the progress or decay of such misplaced pregnancies. Their consideration may, I hope, contribute both to our knowledge and to the intelligent study of the disease.

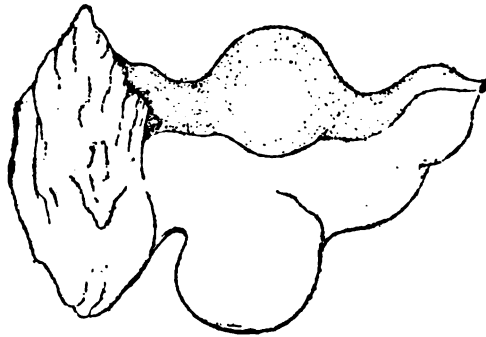
(A) TREATED BY OPERATION.

1. The first case on my list is one characterised by hæmorrhage from the fimbriated end of the tube without rupture or extrusion of the pregnancy or "mole." The salient features of the case are as follows:—

Mrs. E. F——, æt. 44, having four children, the youngest of whom is five years of age, was sent to me by Dr. Martin of Stourport, on June 29th, 1891. Menstruation was regular until eight weeks before I saw her. Since this date there had been history of constant loss, at first profuse, afterwards less in amount. On examination, a large cystic (?) irregularly rounded tumour tender to the touch was found in the pouch of Douglas behind the uterus. This was diagnosed as tubal. On July 13th, 1891, I operated, finding a large clot in Douglas's pouch, limited by rather recent adhesions, and

intimately connected with the large expanded mouth of the right fallopian tube. The latter showed a small globular tumour at the middle of its course, clearly defined, and separated from both uterine and fimbriated ends by some length of undistended tube. The tube and its adjacent clot were carefully removed, and (after an attack of obstruction for which the abdomen had to be re-opened some 36 hours later) the patient made a good recovery.

After removal an incision was made in the unruptured tube over the site of the tumour or enlargement, and the latter was found to be caused by a localised dilatation of the



CASE I.

Tubal pregnancy; unruptured; hæmorrhage into peritoneum from open Fallopian tube. Operation; recovery.

fallopian tube containing a small "mole" of pregnancy attached at one part to the inner surface of the dilated tube.

Here then was a tubal pregnancy causing hæmorrhage equally into the abdomen and (by the uterus) into the vagina. There is no indication of attempted extrusion of the "mole" in either direction, and such a case, although possessing features which bring it into close relationship with other cases which have been so termed, can hardly be classed under the name of "tubal abortion."

2. The second case is one of tubal pregnancy causing early rupture with sudden and profuse hæmorrhage. The case has

additional interest from possessing certain history and signs which point to a previous tubal pregnancy and rupture, but this will be referred to, later on.

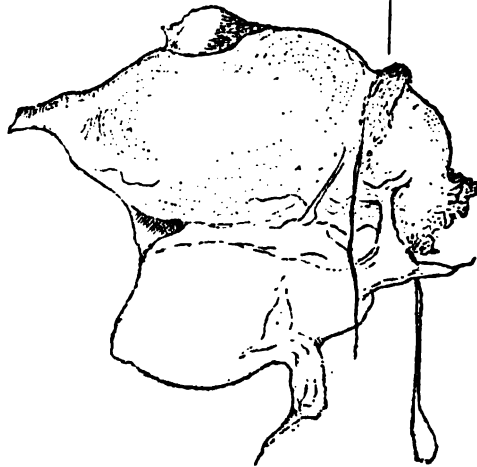
Mrs. A. L. W—, æt. 33, having one child six years of age, had been menstruating regularly for upwards of a year, until December 23rd, 1891, this being the date of the last normal period. On January 20th, 1892, there was a slight "show" but menstruation did not follow, and from the coincidence of some fulness of the breasts and slight nausea the patient believed that pregnancy had commenced. On Jan. 28th, she was troubled with abdominal pain, and in the evening she was once sick and the pulse which had been about 80 or 90 rose to 120. She passed a fair night, but in the morning was sick two or three times and the pulse rose rapidly to 140. I was telegraphed for and saw her in consultation with Dr. Bernays at 11 a.m. She was then faint and pale, but fully conscious, with a quick feeble pulse and distended abdomen. A soft doughy mass was to be felt, filling the pouch of Douglas behind the uterus. I diagnosed the condition as due to hæmorrhage from ruptured tubal pregnancy and advised operation. This was assented to, and two hours later I returned prepared to carry out the advice which I had given. By this time the patient's condition had become exceedingly grave, and there was evidently no time to be lost. As I opened the abdomen liquid blood gushed out like the fluid in ascites, and it was plain that the whole of the abdominal distension was due to the hæmorrhage. Suspecting the pregnancy to be on the left side, I seized the broad ligament close to the uterus, and after detaching several stringy adhesions, I isolated the appendages, finding the gestation and rupture, as had been expected, in the left fallopian tube. This, with its corresponding ovary, was removed. The appendages on the right side were examined, found to be healthy, and returned to the pelvis.

The great difficulty of the operation lay in the cleaning of the peritoneum. The hæmorrhage had been so profuse, and the consequent collapse of the patient so severe, that it

was impossible to finish this satisfactorily. The abdomen was flushed with hot water, and as much of the blood removed as was possible under the circumstances. At this stage the patient was at her worst, and the operation was rapidly completed. A drainage tube was used in the usual way, and the abdomen tightly bandaged. The patient was placed in bed with the lower extremities raised. Her pulse, which had been almost lost, soon became perceptible again, and she slowly recovered.

Site of recent rupture with profuse hæmorrhage.

Site of old rupture.



CASE 2.

Tubal pregnancy ; early rupture with profuse hæmorrhage. Operation ; recovery.

On examination of the specimen removed, it will be noticed that the lesion appears to be altogether incommensurate with the hæmorrhage. On the upper surface of the distended tube is a small recent rupture, from which clot and membrane are slightly protruding. Outside this, considerably nearer the fimbriated end of the tube is another opening, which looks at first like an accessory ostium. On closer examination, I think it will be found that this is the patent slit of a former

rupture. If this interpretation be right (and there is a special clinical history bearing upon it to be considered after the operative series is completed), we have in this specimen an example of two ruptures occurring in the same fallopian tube, the one in 1889, and the other in 1892.

3. The third case is a tubal pregnancy (diagnosed as such the first time I saw the patient), which dilated the fallopian tube to a large size *without rupture*, then became quiescent and stationary for a time, and was finally removed by operation after five weeks' careful observation.

Mrs. E. D——, æt. 32, having four children, the youngest of whom was two years of age, missed her periods for two months in February and March, 1890. From this time until the date of her first consultation on May 5th, there was irregular hæmorrhage from the vagina, accompanied by pain in her back and in her left side. On examination, I found a large retro-uterine tumour extending upwards to the left side of uterus. The latter was distinct from the tumour, and was not appreciably enlarged. The diagnosis was made of extra-uterine pregnancy, and was entered as such on the out-patient's paper of the Women's Hospital to which the patient had come for advice. I explained to her that the condition might be due to pregnancy in a wrong situation, and that an operation would probably be necessary for recovery. Not having accommodation at the Women's Hospital, I admitted her to my house on May 15th. She remained there for four weeks until June 11th, when I removed her to the Hospital for operation. During this time there was little or no alteration in the size of the tumour, but for two weeks before removal there was increased pain, increased tenderness on bimanual examination, and occasionally transient pyrexia, and the tumour assumed a more lateral position. The following note was entered in her operation book on June 13th. "At the left side of the uterus there is a tender tumour almost solid to touch. A prolongation of this, limited in size and shape is suggestive of an enlarged and adherent fallopian tube.

The diagnosis is made of tubal pregnancy." On June 14th I opened the abdomen, and found a tumour of considerable size formed by the left fallopian tube, which was occluded and distended.

The abdomen was quite free from any clot or hæmorrhage, and after detaching some adhesions at the outer part of the tube, an attempt was made to remove the tumour entire. Some softening appeared to have occurred about its centre, and unfortunately during its extraction the top of the tube was torn across. Previous to this there was no sign of any



CASE 3.

Tubal pregnancy; unruptured; stationary tumour with four months' history.
Operation; recovery.

rupture, and (as I have said), the abdomen and pelvis were perfectly clean. The uterine end of the tube was undilated, and there was no difficulty in the application of the ligature. Both ovary and tube were removed in the usual way. The patient did well and left the hospital for a convalescent home at the end of a fortnight. The specimen removed shows a large hæmorrhagic "mole" of pregnancy in the outer part of the left fallopian tube. The sac is plainly visible, but there

is little indication of the foetus. The tube is unruptured, but at the site of the pregnancy it has been divided horizontally, the upper part forming a kind of cap, and the lower part a cup-shaped cavity between which the "mole" of pregnancy was enclosed. After keeping for many months in spirit the tube has shrunk greatly, while the "mole" is comparatively unaltered. At the time of operation the latter was absolutely enclosed in the unruptured tube.

The pregnancy evidently began about four months before operation. The diagnosis was not difficult. The presence of a tubal tumour, the history of two months' amenorrhœa, and the previous healthy condition of the woman, were the chief facts which led to its formation.

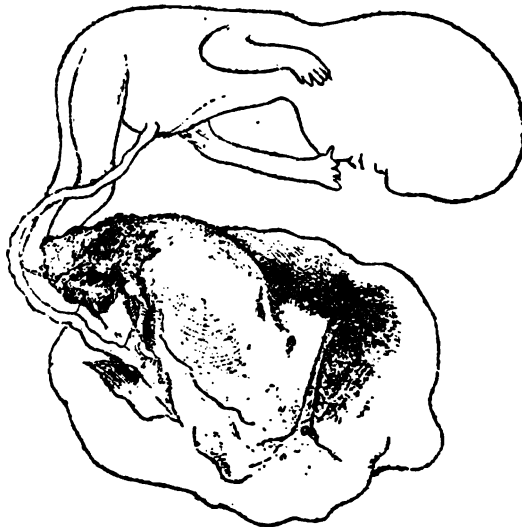
4. The fourth case which I have to bring before your notice is also a tubal pregnancy of about four months' duration, but in this case there has been a proper development of the child, so that the foetus answers very nearly to the recognised normal standard at four months. How has this been accomplished? The pregnancy is in the outer part of the left fallopian tube, at the fimbriated end (a portion of the amnion is visibly adherent here), and some special provision has been necessary for the continued progress of the pregnancy. This was the condition found on operation. The uterus was pushed by the pregnancy to the left side of the pelvis. The space on the right side, gained thereby, was completely filled by the pregnancy, and the latter had encroached upon the abdomen.

A dome-shaped lid formed almost entirely by adherent omentum closed this space above, the upper limit of which could be distinctly felt and seen as a crescentic outline stretching from the crest of the right ilium to the left side of the pubes. In this chamber, boxed-in as I have described, and separate from the general peritoneal cavity, the pregnancy had developed.

The clinical history was as follows :—

Mrs. E. S., æt. 38, menstruated regularly from the birth of

her last child, twelve years previously, until November, 1889. In December and January she had irregular hæmorrhage, and from November suffered with gradually increasing pain on the right side. During the latter end of February this became severe, and prevented sleep at night, and about this time the patient herself discovered a swelling near the right groin, the size of which increased from day to day. At no time was there any definite history of amenorrhœa.



CASE 4.

Tubal pregnancy of four months' growth invading both broad ligament and peritoneal cavity. Operation; recovery.

I opened the abdomen on March 7th, 1888, and found the condition already described. Before operation, there had been considerable bleeding beneath the adherent omentum, but the latter had prevented any invasion of the general cavity of the peritoneum. After removing the child, which was uppermost, I found I could deal with the placenta and tube precisely in the same way as with a tubal pregnancy of early date. The uterine end of the tube was but little

enlarged, and after transfixion of the broad ligament and ligature in the usual way the whole of the pregnancy and blood-clot was removed from the right side of the pelvis. On examination of this it will be seen, I think, that although the meso-salpinx has been widely opened up, as it always is in tubal pregnancy, when the limit of the tube was reached, the farther progress of the pregnancy has been really intra-peritoneal, but confined by adherent omentum, as already pointed out.

This portion of the omentum, to which placenta and blood-clot were very intimately attached, was removed at the operation, and is placed above the pregnancy in the preserved specimen.

The patient from whom the specimen was removed made a good recovery, and the clinical features of the case were reported in the *British Medical Journal*, for December 1st, 1888.

I know that one's interpretation of a case like this (which fortunately has been successful) is very liable to error, and should deprecate in myself as well as in others any attempt at too dogmatic or positive assertion, but if I am right, in view of the case and specimen, it is essentially one of tubal pregnancy commencing in the outer part of the tube. At the present stage, the stage of operation, it may be said to partake of the nature both of a broad ligament and of an intra-abdominal pregnancy, but it has never been a distinct or true broad ligament pregnancy. I take it to be a tubal pregnancy *becoming abdominal*. I cannot help believing that if it had been possible for the patient to go to full term without disturbance of the pregnancy or death of the child, the latter, as it grew, would have ruptured its sac, have slipped up into the abdomen under the omentum, and have left the whole of this pelvic space for the farther growth and development of the placenta.

The case seems to me to form an important connecting link between earlier cases and the next one on my list, which is one in which the child has undergone its final development within the abdomen itself.

5. The fifth case is one which I reported in some detail, as regards its clinical and operative features, to the Obstetrical Society last year.

In the present instance, it will probably suffice to say for introduction that it was a case of pregnancy at full term, in which the child was found free in the abdominal cavity beneath the omentum, and the removal of the child, and subsequent removal of the placenta was followed by the recovery of the mother, and life of the child.



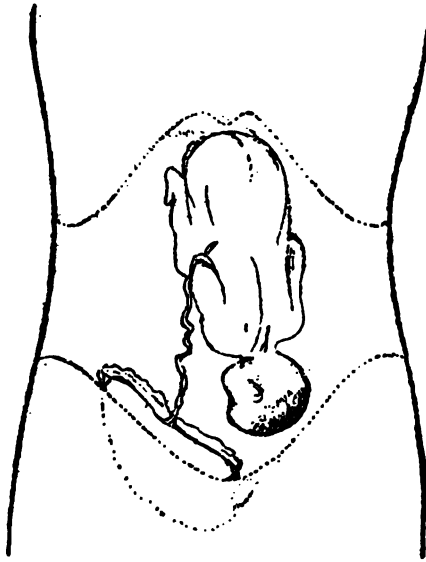
CASE 5.

"Abdominal" pregnancy (*i.e.*, with child free in the abdomen). Drawing of abdominal contour before operation.

The child, as I have said, was found free in the abdomen, at some distance from the placenta, and with no covering beyond omentum. Other cases of exactly the same kind are well known (Mr. Jessop's and Dr. Champney's for example), and in calling such extra-uterine pregnancies, "abdominal," I use the term as descriptive of a matter of fact regarding

the child, and not as necessarily involving any theory of growth.

In my report of this case I stated that in my belief the pregnancy was originally in the fallopian tube, and that the child had become intra-abdominal without any intermediate sub-peritoneal development. I see no reason to alter this opinion in any way, and because I believe this form of extra-uterine pregnancy is insufficiently known, and often misunderstood, I must crave your indulgence while I go into some of the facts and reasons on which this opinion is based.



CASE 5.

"Abdominal" pregnancy. Position of child and placenta, the child lying beneath the great omentum and completely covered by this. Operation ; recovery.

I am unable to produce the child and umbilical cord—the child having lived for some months after birth—but all the rest of the pregnancy was removed from the abdomen, and is to be found in the specimen before you, nothing being hidden or omitted. It consists, as you will see, of a perfect

placenta having a narrow band or fringe of amnion adhering to it. This placenta was situated on the right side of the pelvis, by its upper surface blocking the inlet almost on a level with the crest of the ilium, by its lower surface forming a tumour in the pouch of Douglas which was distinctly felt on vaginal examination.

The child was lying on the left side of the abdomen, its breech high up beneath the ribs, its head (the lowest part) above the left groin of the mother. It was, therefore, on the opposite side of the abdomen to the placenta and excepting by the cord the infant and its resting place had no attachment or connection whatever with the placenta. The child was naked, simply covered by and folded in the great omentum, and at its lowest part under the head of the child the omentum was adherent.

All the main facts regarding the position of the child and of the placenta were distinctly made out, the first time I saw the patient, and a rough plan was drawn showing their relative position, which the operation some days later proved to have been correct in every respect. If, with the consideration of this, we couple the scantiness of the amniotic remains and the proved absence of any sac about the foetus, we are forced to conclude, I think, that the rupture of the sac could have been of no recent date. The omentum had become adherent in front as in the previous case, and the foetus must have passed up into the abdomen beneath it, and undergone its final development within the abdomen, but very closely surrounded by intestine and omentum.

In describing the removal of the placenta in my report of the case I said, "one large piece of tissue of uncertain nature, to which the placenta had been attached was trans-fixed and tied, but only in this case was it possible to use a ligature to the bleeding parts." I was working in a pool of blood, and in a simple clinical record did not feel justified in using any more certain language regarding this. I have but little doubt, however, that this tissue was really some of the remains of the original fallopian tube, and that when I had

removed both child and placenta I had practically reduced the case to the anatomical (but not the surgical) simplicity of a ruptured tubal pregnancy.

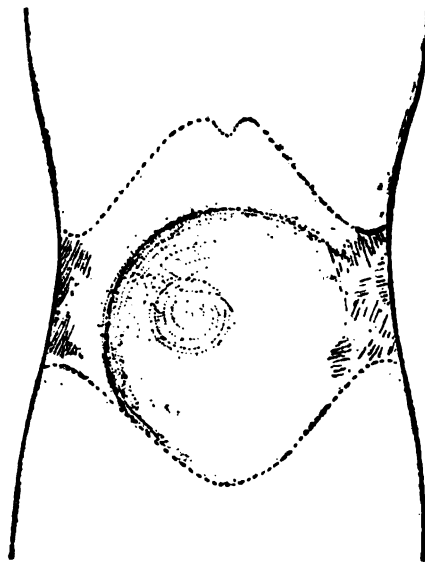
6. The last case of my operative series is one in which an extra-uterine pregnancy progressed beyond full term in a thick intra-peritoneal sac. The beginning of the pregnancy probably dated from one year previous to my first knowledge of the case, and the final three months of this time had been for the patient a period of great suffering. Grave constitutional disturbance of septic nature, characterised by pyrexial rigors, vomiting, and marked prostration, obliged the patient to keep entirely to her bed, and when I saw her (on Feb. 17th, 1891) everything seemed to point to a fatal issue at no very distant date.

The notes of the case are as follows :—

Mrs. M. A. W., æt. 36, has three children, the youngest of whom is two years of age. This baby was suckled for 16 or 17 months, menstruation recurring regularly during the greater part of the time. About one year ago the periods ceased, and although some hæmorrhagic discharge occasionally took place, this was irregular and scanty. The abdomen began to enlarge and the patient supposed that she was pregnant, but during the whole of this period of enlargement she had never clearly felt any movements of the child.

The patient is emaciated, sallow and anæmic. Her tongue is catarrhal and tremulous. She is feebly apprehensive, crying out at the thought of any disturbance of position or possible pain from palpation of the abdomen. The examination is therefore made under anæsthesia. The abdomen is seen to be enlarged and prominent, particularly upon the left side. The line of greatest girth measures $42\frac{1}{2}$ inches. The enlargement is evidently caused by a firm and well-defined swelling, dull on percussion and obscurely fluctuant to touch, which occupies about three-fourths of the superficial abdominal area. It is lateral in position, filling the whole of the left side of the abdomen, below the umbilicus,

and extending over about two-thirds of the right half of the abdomen. The upper limit of the tumour is marked by a crescent or arc which crosses the middle line half-way between the umbilicus and ensiform cartilage. The tumour is fairly regular in outline, and tense or resistant to touch, except over a limited area to the right of the umbilicus. Here a kind of "ballottement," or rather pressure through fluid to a more solid part beneath, can be distinctly made out.



CASE 6.

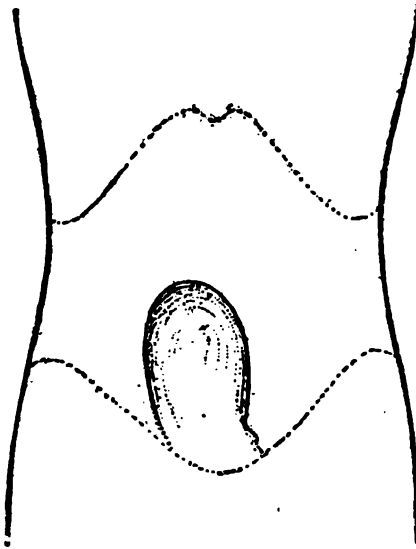
Extra-uterine pregnancy contained in intra-peritoneal cyst. Drawing of abdomen before operation.

Per vaginam, the uterus can be felt enlarged, distinct from the tumour, and crowded to the left of this. The cervix is not developed as in the pregnant uterus. The sound passes to 5 inches. A large rounded mass can be felt in the pouch of Douglas. This appears to be one with the abdominal tumour.

Examination of the abdomen, by auscultation, for indication of placental souffle or foetal heart-beat is negative.

An alternative diagnosis was made of extra-uterine pregnancy with dead foetus or ovarian tumour.

On February 27th I opened the abdomen over the area of least resistance already referred to, feeling assured that by so doing I should avoid the placenta. On dividing the parietal peritoneum, which was free from either displacement or adhesion, the wall of the tumour became visible, dark red, or almost purple in colour. I tapped the cyst with an ovariotomy trocar, and evacuated several pints of dirty brown fluid.



CASE 6.

Extra-uterine pregnancy contained in intra-peritoneal cyst. Diagrammatic representation of cyst after removal of child. Operation ; recovery.

On opening the cyst, the child was seen within it, dead, and beginning to decompose. I removed it.¹ As I did so the sac, which although thick was very brittle, tore slightly in a

¹ The child was of full size, and with the exception of some unnatural enlargement of the head, was otherwise well formed. It was of female sex, and weighed 6½ lbs.

downward direction, and I noticed that great care was necessary in dealing with it. It was strictly intra-peritoneal, free from adhesions except some easily separated ones to the great omentum, and might possibly have been removed entire. It appeared to spring from the pelvis, having a very broad base with the uterus underneath it. What it was formed by remained doubtful, as it could not be minutely examined without risk of damage. Its interior was very foul, and the condition of the patient so grave that I had no difficulty in deciding that the safer and quicker course was to terminate the operation by sewing the sac to the incision. I accordingly did so, leaving the placenta to slough out subsequently. The result was satisfactory, the patient having no bad symptom after the operation was completed.

The placenta separated and came away about four weeks afterwards; but this took place without any constitutional disturbance, and with the exception of a small sinus, which it has been difficult to thoroughly heal, the patient is now quite well.

(B) TREATED WITHOUT OPERATION.

7. In addition to the dangerous cases of early tubal pregnancy, with or without rupture of the tube, such as some of those I have reported, I daresay that others beside myself have met with one or more cases in which the physical signs, the symptoms and history, all justify the diagnosis of tubal pregnancy, but where there never was any symptom sufficiently severe to demand surgical treatment or where, if a crisis occurred, it was weathered safely and the patient recovered without operative interference.

Such a case, when it rests on diagnosis only, undoubtedly influences one's own opinion and judgment regarding the disease, but can be made of but little use to others, who will naturally be dubious as to the value of the observer's conclusions. Such a case, however, resting on something more than my own judgment, was met with, as I have already

hinted, in the previous history of the second patient of my operative series.

On Dec. 22nd, 1889 (two years before the pregnancy when I operated), after nearly six weeks' amenorrhœa, during which she believed that pregnancy had begun, the patient was attacked with symptoms of peritonitis. Coincident with this, a tumour—evidently a hæmatocele—developed on the left side of the uterus. I diagnosed the condition as probably due to the rupture of a tubal pregnancy, but the hæmorrhage was not severe, and was evidently circumscribed by local inflammatory action.

Sending over one of my nurses to administer enemata and to be in readiness should further action be necessary, I left the patient in charge of her usual medical attendant, who promised to summon me should no improvement take place. In twelve hours, all the more acute symptoms had subsided. The bowels, rebellious for some hours to the enemata, were freely opened after a dose of calomel, and when I next saw the patient, although a well-defined hæmatocele of considerable size remained in the pelvis, the immediate danger had evidently passed.

The patient was kept in bed for about six weeks, by which time the hæmatocele had become absorbed, and the parts on examination had returned to a fairly normal standard. From this date the patient remained in good health until the second rupture of the tube with profuse hæmorrhage, for which I had to operate in January last.

The value of this case or clinical history lies, of course, in the fact that at this operation distinct confirmation was found of the correctness of the diagnosis made some two years previously. The stringy adhesions which bound the tube in the pelvis, and the old line of rupture still visible in the tube—distinct evidence of the old attack—may be noticed side by side with the recent lesion for which the abdomen was opened.

I would remark in passing that, while this case is a proof that recovery from the rupture of a tubal pregnancy

occasionally takes place without an operation, it affords but little ground for trusting in expectant or medical treatment. In the case before us, recovery from one rupture was followed later on by another much more awful in the severity and urgency of its results, in which the patient so nearly lost her life that I have never seen a nearer escape from death.

COMMENTARY AND CONCLUSIONS.

The remarkable success which has attended so many recent operations for extra-uterine pregnancy is worthy of note. It would be perhaps impossible to find worse cases than some of those I have reported this evening, yet all have recovered. Those who have worked earliest and longest in this field, particularly my senior colleagues, Dr. Savage and Mr. Tait, are especially to be congratulated on the wonderful saving of life and recovery of health which have resulted from the development of this branch of surgery.

But there are other features of these cases besides those of a purely surgical character that may well engage our interest, notably the evidence which they afford :—

- (1) Of hæmorrhage without rupture of tube.
- (2) Of recurrent or double rupture in the same tube.
- (3) Of marked and persistent enlargement without rupture.
- (4) Of diagnosis before rupture.
- (5) Of cure without operative treatment ; and
- (6) Of the possible stages through which a tubal pregnancy may become abdominal with development to term.

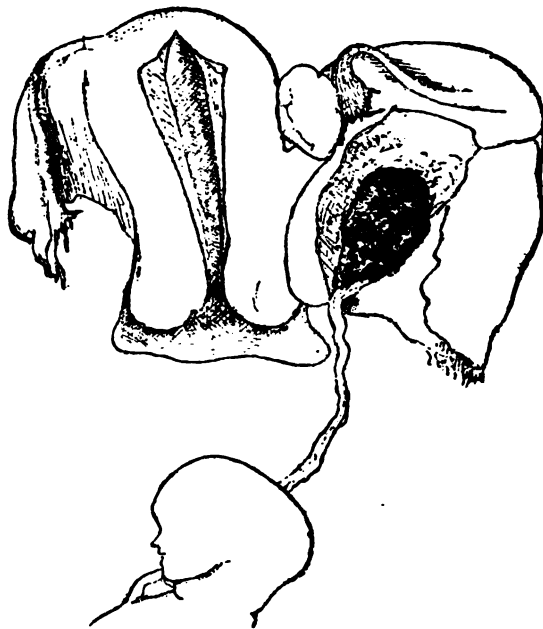
The chief interest to myself lies in a careful study of the last three cases of my operative series, especially when compared with other more or less similar cases which have been reported elsewhere.

On quite recent examination of the specimen removed from my fourth case—an examination necessitated by its preparation for exhibition—I notice that it perhaps affords stronger ground, than I had thought, for recognition as a “broad-ligament pregnancy,” and I daresay that some may be disposed to so regard it. But I question very much

whether a pregnancy in the outer or fimbriated end of the tube, as this has been, can ever be rightly regarded as one of the broad ligament, however much this may be opened up by the growth of the placenta. For, in these cases, sooner or later, the abdominal ostium is bound to rupture or reopen, and invasion of the peritoneum itself, either by hæmorrhage, by the foetus or placenta, warrants the appellation either of ruptured tubal pregnancy, or if later, the description which I have given of "tubal pregnancy becoming abdominal" as most in accord with the facts of the case. And here I would point out that imperfect as surgical specimens must necessarily be from a pathological point of view, post-mortem specimens are by no means always reliable. No single frozen section can be conclusive as to peritoneal relations. A ruptured tubal pregnancy of this kind would only show its intra-peritoneal aspect in a section which cut this portion of development or extension. A section to one side of this would show the pregnancy as outside the peritoneum altogether.

Furthermore, there is a "broad-ligament pregnancy" at this stage which is vastly different, and demands recognition as a special development, distinct from either "tubal" or "abdominal." This occurs when a tubal pregnancy at the *middle or uterine end* of the Fallopian tube ruptures into the broad ligament and undergoes its development here, outside the tube, and wholly underneath the peritoneum. A beautiful specimen of such a case at the fourth month is to be found in the museum of Queen's College, Birmingham, presented by Mr. Hancox, and forms in all its features a marked contrast to my own case at the same period of development. An outline drawing of this specimen, showing the fimbriated end of the fallopian tube on the same side unaltered by the growth of the pregnancy, marks (better than words can describe) the salient features which separate a true "broad-ligament pregnancy" at four months from one of the same date, which, originating at the outer part of the tube, has maintained its tubal character throughout, but from this invaded both broad ligament and peritoneal cavity.

The masterly generalisation which, I believe, we owe to Mr. Tait, of tracing nearly all the forms of ectopic gestation to a tubal origin, has done very much to simplify an exceedingly difficult subject, and it would be impossible to estimate too highly the value that this has been in all recent study of this disease. But there is a fascination in reducing complex phenomena to order and rule, and there may be a danger of



"Broad ligament" pregnancy. (Drawing from specimen in Queen's College Museum, Birmingham.)

sometimes forming laws which nature does not recognise. Both Mr. Tait and Mr. Bland Sutton appear to write as if all advanced cases of ectopic pregnancy were developed beneath the peritoneum, as in the well-known case described by Drs. Hart and Carter. The consideration of such cases as my fifth and sixth will show, I think, that this is untenable. Let any one plan an abdominal section in the case reported by Drs.

Hart and Carter, and they will see that the conditions to be necessarily met with absolutely separate this from such cases as Mr. Jessop's, Dr. Champney's, or the fifth of my series; and both of these forms again are equally separated from such cases as my sixth case, or the one recently reported to this Society by Dr. Leith Napier.

There are, I believe, at least three methods of final development of the foetus to be met with in advanced ectopic gestation.

(1) In the broad ligament beneath the peritoneum, as in the case of Drs. Hart and Carter (extra-peritoneal).

(2) In an intra-peritoneal sac probably formed by a local development of fallopian tube and broad ligament—in which the whole tumour is no more extra-peritoneal than is the pregnant uterus.

(3) Within the abdomen itself. In these cases, the child is closely surrounded by omentum, and the placenta has attachments which are probably sub-peritoneal and tubal.

But, in all, the pregnancy is originally tubal.

Dr. HEYWOOD SMITH wished to ask Dr. Taylor why he used a drainage tube in his second case? was it because he had to finish the operation before he had had time to completely flush the abdomen. He also would draw attention to the varying amount of the hæmorrhage in these cases, some owing to the rapidity of the outpour calling for immediate operation, and others oozing so slowly as to allow of some delay, and so giving a chance of the pregnancy going on. Was this due to the locality of the rupture, and if so, on what does it depend, and which portion of the tube bleeds most freely?

Mr. BLAND SUTTON was especially interested in the first case related in Mr. Taylor's paper, because it was an example of incomplete tubal-abortion. This was of importance, because, at a recent meeting of the Society, Mr. Lawson Tait was disposed to doubt the occurrence of tubal-abortion, or to look upon it as being very rare. This, however, is an error, and Mr. Sutton's observations as well as a number of recently re-

ported cases, must convince Mr. Tait sooner or later that tubal-abortion is of more frequent occurrence than he is now willing to admit. Mr. Taylor's suggestion that in his first case the blood from the gravid tube passed equally into the abdomen and into the uterus is ingenious, but we must wait for further facts in relation to it, because the escape of blood from the vagina, when a gravid tube ruptures, is very common, and is certainly in the majority of cases due to detachment and often expulsion of the decidua from the uterus, either entire or in shreds.

Mr. Taylor's use of the term abdominal pregnancy is unfortunate, for it may be taken to signify that the impregnated ovum had fastened itself upon the peritoneum—a view that is now known to be absolutely untenable.

Mr. LAWSON TAIT said it was remarkable how such radical pathologists as Mr. Bland Sutton would have to change their opinions. Such statements as he made were far too inflexible. He had, at the present moment, lying in these very rooms, a foetus of the full term, which he had removed from among the intestines, and round which nearly complete amniotic membranes were to be seen. Mr. Sutton might examine it for himself and make what he could of it.

As to Mr. Bland Sutton's statement that he (Mr. Tait) had made an attack on his cases, the fact was clear that Mr. Sutton had not read his (Mr. Tait's) paper. No attack had been made, for surely a mere difference of opinion does not justify the use of such a term. He had not said that cases where the ovum escaped through the abdominal ostium did not occur, but he did say that they must be rare; for in his, admittedly the largest experience in the world, no such case had occurred. He disputed Mr. Bland Sutton's explanation of these and his conclusions from them, and most of all he warned the profession against the introduction of such a term as "tubal abortion," as constituting an element of confusion and danger, besides being wholly unnecessary.

Mr. JOHN W. TAYLOR, in reply, said: I am sorry, Sir, that Mr. Bland Sutton should have misunderstood my use of

the term "abdominal," as applied to a pregnancy in which the child is found free in the peritoneal cavity. I carefully and explicitly guarded the term, as I thought, from any possible mistake, by saying that I used it as descriptive of a matter of fact and not as involving any theory of growth.

When one speaks of a "broad ligament pregnancy," nobody supposes in the present day that the pregnancy is considered to have originated *de novo* in some mysterious way in the broad ligament. It is, of course, understood that a tubal pregnancy has ruptured into the broad ligament, and that the pregnancy has undergone further development in this situation. Similarly, when I speak of an "abdominal pregnancy," no one would suppose, in the present day, that the pregnancy is considered to have originated *de novo* in some mysterious way within the peritoneal cavity. It is, of course, to be understood that a tubal pregnancy has (either by rupture or by opening out of the fimbriated end of the tube) entered into the peritoneal cavity, and instead of terminating has continued its progress and development within the abdomen itself.

If the child be found on operation, as in my fifth case, to be without an amniotic sac surrounding it, it does not follow that the child did not possess a proper amnion at an early stage. I myself have specially drawn attention to the remains of this structure, which may be seen attached to the placenta in the specimen I have shown this evening. But the scantiness of these remains, their utter inadequacy to form anything approaching a sac which could surround a mature foetus at full term, form very strong, and I believe, sure grounds for the belief that the rupture of the amniotic sac must have occurred some considerable time before the date of operation, and that the final development of the child has been directly and strictly "abdominal."

Dr. Inglis Parsons has asked me if I consider the hæmorrhage in my second case to have been a late result of the tubal pregnancy which occurred some two years previously. In reply, I can but emphasize what I have already said, that in this most interesting case, I certainly believe we have

decisive evidence of two distinct extra-uterine pregnancies occurring in the same fallopian tube—the one pregnancy occurring in 1889, and the second in February last.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MAY 12, 1892.

HEYWOOD SMITH, M.D., VICE-PRESIDENT, IN THE CHAIR.

PRESENT: 25 Fellows and Visitors.

The following were elected Fellows of the Society: Dr. Wm. J. McKay and Dr. W. C. D. Davis.

The following Paper was read:

On the Diagnosis and Treatment of five Cases of Tubal Gestation. By Dr. G. CLEGHORN, Blenheim, New Zealand; with specimens, pathological notes, and observations by J. A. SHAW-MACKENZIE, M.B. (Lond.), M.R.C.S., Pathologist to the Chelsea Hospital for Women, late Registrar to the Victoria Children's Hospital.

THE following clinical notes and specimens were forwarded to the Editor of the BRITISH GYNÆCOLOGICAL JOURNAL, and, by his kindness, placed in my hands for examination and preparation, and with your permission I shall have the honour of reading Dr. Cleghorn's notes, with my report of his specimens, and some conclusions from his cases, which deal, I think, more especially with the diagnosis of tubal gestation.

The first case was considered hopeless when first seen, the clinical notes being as follows:—

“*Case I.*—Mrs. G——, age 30, married ten years, five children, youngest 12 months old, still suckling; two miscarriages before birth of last child. Menstruation began at 14, and has been normal. Menstruated seven weeks ago, the only time since birth of child. For the last three weeks the milk has been going off, and the child could only be induced to suck with difficulty. She had two hearty meals in the

evening, and soon after getting up the following morning she was seized with a dreadful pain in the lower part of the abdomen, obliging her to return to bed.

"She was seen and treated by an unqualified man. In the afternoon she had a return of pain, brought up a little bile, and the pain continued during the night. On March 17th the day after first symptom, I was sent for to see her, at her home ten miles out, as she was unable to pass water, which she had had difficulty in doing since the commencement of the pain. On arrival at 8 a.m. I found her blanched, pulseless, and apparently moribund, complaining of pain over abdomen, and especially in left inguinal region. On vaginal examination, the os was open and central, and the menstrual flow, which had begun the day before, with the pain, was bright and free. No clots or shreds had been passed. There was a small smooth swelling in Douglas' pouch, with great tenderness, and a vessel could be felt pulsating in the position of the left Fallopian tube, but the abdominal walls were too rigid for accurate delimitation, nor could the fundus uteri be found. The urine was drawn off, and morphia given hypodermically. The diagnosis of ruptured ectopic gestation was made, but situated as I was, without necessary appliances, and so far from assistance and with the patient apparently moribund, I considered any attempt at operation hopeless. With further experience, and in the light of the brilliant results achieved by Lawson Tait, and reported in the GYNÆCOLOGICAL JOURNAL, I feel that an attempt should have been made to save a life otherwise doomed, even though there was the necessary delay of two to three hours before I could have returned with assistance and appliances.

"As it was, she lingered on for five days, during which for a few hours on the second day a very small quick pulse could be felt. This, however, was the only symptom of rallying, and she gradually sank. Morphia and the catheter had to be used throughout. No *post-mortem* was allowed."

Case II. Specimen A and X.—This consists of the left Fallopian tube distended to about an inch diameter. Below

and behind it, is a cavity in process of being built in by lymph, and organising blood clot. A complete decidual cast of uterus is seen. On longitudinal section of the tube it is filled with blood clot. Microscopically, no traces of foetal structure or chorionic villi are seen, but taking it into consideration with the complete decidual cast, which shows true decidual cells and open glands, there can be no doubt this is a case of tubal gestation of seven weeks. The actual point of rupture is not made out. The clinical notes are as follows :—

"Mrs. M.—, aged 30, married eight and a-half years ; two children, 7½ and 5 years old. No miscarriages. Menstruation began at 13½, and had been normal. Was unwell thirty days ago. Nothing noticeable (except she thought she might be pregnant, as she felt the same as during the first month of her previous pregnancies) till an attack of severe pain, with commencing menstrual discharge, which necessitated sending for medical advice. Four days later a second attack of pain occurred, and continued at intervals to the fifteenth day. The pain was referred to the left inguinal region. On the evening of the first day the Cast X exhibited was passed, after which she was seen for the first time, and then appeared easy. On the fourth day she was blanched and pulseless, but ready shortly to resume household duties. On vaginal examination the blood discharge was profuse and dark, the os open and central, but uterus was very tender to touch, and remained so to the fifteenth day. The fundus uteri could be felt just above the pubes, anteflexed, and tilted to the right, while the sound passed three inches. A tumour could be felt in the position of the left tube about the size of a walnut, and tender. This enlargement increased daily, and the left roof of vagina appeared wider. A large vessel, and several smaller, could be detected pulsating in lower border of broad ligament, and over the swelling. No *ballotement* made out. *Per rectum* the physical signs were the same, except the pulsation was less distinct, tumour smoother and rather larger.

"The diagnosis of tubal gestation seemed clear fifteen days after first attack of pain, though it had been suspected four days earlier, but, in the face of no missed period, perimetritis seemed more likely. As the only other medical man resident here, Dr. Nairn, would be occupied in giving the anæsthetic, I telegraphed to my friend, Dr. Wallace Mackenzie—who practises as an oculist in Wellington, seven hours' journey from here, and who, in his periodical visits to Blenheim has often given me valuable assistance in operations—telling him the nature of the case, and asking him to come over, which he did on first opportunity, two days later.

"In the meantime, on looking over back numbers of the GYNÆCOLOGICAL JOURNAL, I came across Dr. Aveling's paper, and the discussion on it on the use of faradism. Thanks to the Journal, I had been made aware of the disastrous results attending other methods of applying electricity, but was struck with the simple method advocated, and by the fact, so far, it had been uniformly successful. After consultation with my colleagues, in which we all agreed as to the diagnosis, the negative pole of an ordinary Maw's bichromate battery was placed in apposition with the vaginal swelling, and the positive on the abdominal wall over it. The current was now passed for fifteen minutes, and she slept well for the first time for three days without morphia, and the size of the tumour seemed less. This was repeated with considerable success for four days, when all the symptoms of pain, hæmorrhage, increasing tumour, determined me that abdominal section was the only resource; so twenty-four days after the first symptom, Dr. Nairn administered chloroform, and, assisted by Miss Rees, matron of the local hospital, I opened the abdomen by an incision three inches in length. The peritoneum was much injected and inflamed. Following Mr. Lawson Tait's practice, I immediately pierced the left broad ligament with a blunt pointed needle, and ligatured it with a double locked ligature. The swelling was then separated from its adhesions. A ligature was passed round the broad ligament on the uterine side of the double ligature, and the

specimen A was removed. A little bright blood welled up from the bed of the tumour, which at that point had been adherent to the sigmoid flexure. This adhesion was ligatured and removed. A handful of blood clot was removed from Douglas' pouch, the peritoneum washed out with a large quantity of hot water, Keith's drainage tube inserted, and wound closed in the usual way. The tube was emptied in two hours, and again every four hours, the fluid being dark blood-colored serum, which continued to the end.

"The temperature, after being 97 after operation, soon rose to 100 and 101, varying for three days, when she gradually sank. No *post-mortem* was allowed.

"It is remarkable that no periods were missed. It will naturally be asked why was not abdominal section performed earlier, when the signs of fresh hæmorrhage occurred, that was, twenty-one days after the first symptom? My only answer is that faradism had had such a magical effect four days before that I felt it must have some unknown influence in checking the hæmorrhage, besides that of killing the fœtus, and that it was worth one more trial. I feel now, if section had been performed then, the result would have been different. Again, it might be asked why was faradism continued after its first satisfactory application? I can only say that in the accounts I had seen of its application, it was recommended to be applied four times, and as the result had always proved favourable, I thought the repetition might have some effect in arresting further growth of the maternal portion of the placenta, and that it was due possibly to its repeated applications that no case had been reported where the placenta continued to grow after the treatment had been applied."

The passage of the decidual cast would, in the light of present cases, make clear the diagnosis of tubal gestation on the first day of being seen.

Case III., Specimen B.—This specimen consists of a longitudinally bisected, oval blood-cyst, about the size of a large lemon, with remains of tube and ovary. Microscopic sections show at line of junction of tube indistinct chorionic villi, and

there can be no doubt of its being a case of tubal gestation of eight weeks, with primary rupture into broad ligament. The ovary contains a large corpus luteum. The clinical notes are as follows.—

“Mrs. B., age 39, married at 19; three children, ages 19, 17, and 15 years; no miscarriages, menstruation normal; helps her husband on a small farm forty miles away, and is an intelligent, unaffected, cheerful woman.

“*March 29th*, 1891.—First consulted me for pain in right inguinal region, extending from there to the back of the hip, from which she had been suffering for six weeks. She had some similar pain two years ago. After excluding other than pelvic trouble, and being unable to satisfactorily make out her condition without an anæsthetic, I administered chloroform, and made a vaginal examination. The uterus was anteflexed, sound passed two and a-half inches. The roof of vagina was wider on right side than left. The right ovary was size of a bantam's egg, left ovary normal, and a thickening could be made out in each broad ligament in the position of the fallopian tubes. She was ordered small doses of magnes. sulph., opium liniments, and told to return in two months.

“*June 18th*.—Returned to me with pain much worse, and with the following account. Five days after I had seen her menstruation commenced, and lasted three days. Then a severe pain in right inguinal region, lasting eighteen hours, came on, causing her to faint. This kept her in bed a fortnight, as any attempt to rise made her faint. During this time there was a yellow discharge, and pieces of something like skin came away. At her next expected period, April 30, she had very severe pain but no flow, and fainted away. The pain, referred to right inguinal region, kept her in bed four days. At next expected period, May 28th, a few dark pieces (? decidua) passed with blood and lasted two days.

“On examination, the body of uterus was found pushed over to left side; os open, cervix enlarged and pointing backwards. Uterus anteflexed, fundus felt just over pubes in left inguinal region. Sound passed three inches. A smooth

ovoid swelling of size of lemon felt in right broad ligament above and behind cervix, somewhat tender on pressure. In front of and below this and between it and pubic arch, the ovary could be felt a little larger than when last felt. A vessel, the size of radial, could be felt pulsating in lower border of broad ligament, and smaller vessels could be made out over the surface of the swelling. There was a marked groove between the swelling and uterus. *Ballotement* could not be detected. *Per rectum* the same condition could be recognised. Patient stated sexual intercourse occurred on March 28 and May 23 only. I determined abdominal section would give her the best chance. Dr. Wallace Mackenzie was due on one of his periodical visits in ten days, and I determined to await his arrival, which was postponed from time to time; but now, with his assistance and that of Dr. Nairn, and fifteen weeks three days from the time the pain came on, on April 6th, I opened the abdomen and ligatured the right broad ligament, then separating the dilated part of the Fallopian tube, which was adherent to the surrounding structures, I brought it and the ovary out of the abdomen and removed them. On the posterior and lower portion of the swelling the finger came on a weakened spot, and I was afraid the tube would rupture, but succeeded in removing it whole. There was a good deal of oozing from the cavity in which the swelling was embedded, but this was washed out with a large quantity of hot water, and a Keith's tube inserted and abdominal incision closed. The quantity of dark-coloured serum removed from the tube was small. The tube was removed on the fourth day, and the convalescence was uninterrupted, the temperature only once going up to 100°. The menstrual flow occurred on the evening of the operation, and lasted four days. This case should have been operated on as soon after June 18th as possible, and if any paroxysms of pain had come on I should have done so at once. As it was she was kept in bed, and examined twice a week, the tumour increasing steadily in size. It is curious this pregnancy should have occurred after fifteen years, and its connection with the passage of the sound is almost more than a coincidence."

I would submit Dr. Cleghorn's duration of pregnancy doubtful, if intercourse only took place on dates mentioned. It seems more probable that impregnation took place on the day of intercourse, May 23rd; the duration therefore would be twenty-six days from intercourse, or twenty-one from the show, May 28th. The specimen bears out this view, being fifty-six days, or eight weeks from May 28th to July 3rd, the date of operation.

Case IV., Specimen C.—This is a specimen of untended tubal gestation of seven weeks. The distal end of the tube is dilated, and contains an undeveloped foetal structure. The ovary below shows a marked corpus luteum. The part is in position as found at operation. The clinical notes are as follows :—

"Mrs. D——, 27, married at 16, one child aged 10 months. Several miscarriages, all at less than two months, but only the clots came away. No membranes or anything like a placenta had come away. Menstruation regular since 13, accompanied by a little pain usually before the flow.

"*August 29th, 1891.*—Came fifteen miles up country to consult me for a pain across lower part of abdomen, amounting to paroxysms, from which she had been suffering for three weeks. Menstrual flow came on twelve days ago, with shreds or clots. Breasts ache slightly. Flow plentiful and bright. Cervix uteri enlarged, and pointing to the left. Circular, uterus enlarged and towards the left. Tender to right of uterus in broad ligament, and vessel could be felt pulsating, also one of smaller size in uterus. Abdominal walls too rigid to allow of examination without an anaesthetic. This condition of local tenderness, pulsating vessels, and rigid abdominal walls was identical with Cases I. and II.

"*August 30th.*—Under chloroform, at tender spot, bimanually a distinct globular swelling, the size of a walnut, could be made out, and over it small pulsating vessels, and one large vessel could be felt pulsating in lower border of right broad ligament. The left ovary was apparently normal, but its position was not defined. Sound passed three inches. *Per rectum* the same.



"September 2nd.—No alteration.

"September 3rd.—During the night pain, with gushes of menstrual fluid, occurred. Examination showed tenderness in Douglas' pouch, and indistinct fluctuation. For the same reason as in previous case I decided to operate and not to apply faradism; and at 4 p.m., chloroform being administered by Dr. Nairn, the abdomen was opened by a small two and a-half inch incision. Some dark-coloured fluid escaped, but no clots. The peritoneum was injected and omentum adherent at upper part of incision, but of old duration. The right broad ligament was ligatured at once, and the right tube and ovary removed. The dilatation of tube commenced half-an-inch from the uterus, and contained a small solid body, which was moveable in tube. The right ovary was situated just below this, and the two together formed the swelling bimanually felt on examination. While the matron was holding up the tube previous to removal, it broke off, but it has been sewn together in relative position to ovary and forms the Specimen C. It was considered advisable to remove the left ovary and tube also. Keith's drainage tube was placed in Douglas' pouch, and the abdominal incision sewn up. Patient made an uninterrupted recovery. My difficulty in this case was to determine if normal abortion was about to occur, or if I had to deal with a gestation tube. However, when I found tenderness and indistinct fluctuation in Douglas' pouch, and that nothing but blood had come away, and that os and cervix were unchanged, I considered the diagnosis of tubal pregnancy was clear, and at once decided to operate. I am more doubtful now of my diagnosis now that I have seen and handled the specimen, though not opened it, yet what else it can be in the tube but an early ovum I do not know."

Case V., Specimen D.—This specimen consists of a complete decidual cast of uterine cavity and casts of tubes. The cast of right tube is thin and tapering, the left is broad, evidence of the dilatation of tube. Attached to it is an organising blood clot, about the size of a largish walnut. In this clot is seen an elongated bluish central body. Microscopi-

cally, the wall of this shows a layer of rounded cells, two deep, and is practically the amniotic sac. There are indistinct chorionic villi cut transversely. There is no doubt this is a case of apoplectic ovum, probably of left tube. I would submit it occurred either in the tube or in the uterus, and spontaneously aborted. The difference in size of the tubal casts is apparent, and it is interesting to note the formation of a decidual cast in the tubes continuous with that in uterus. The clinical notes are as follows :—

"Mrs. C—, aged 25, married two years ; no children or miscarriages. Menstruation began at 13. Always has pain beforehand, loses a great deal, and at intervals of twenty-one days.

"*July 7th, 1891.*—First seen. Had been losing a great deal and was in great pain, which became more severe and expulsive at times. On examination the uterus was found somewhat enlarged and retroflexed. Os circular, cervix enlarged. A good deal of pulsation could be felt in the vessels of the fundus. There was also marked tenderness on the left side above cervix. She had not menstruated for three months, and had been in poor health during that time. I gave her chloral, and she went to sleep for some hours, and the pain ceased till July 9th, when, after a few pains, the specimens above mentioned were expelled. Having never seen or heard of a similar cast, I forward it, together with the specimens of dilated tubes, to bring the case before the notice of the Fellows of the Society.

"*September 6th.*—I examined Mrs. C— to-day under chloroform, as she has been complaining of severe pain in left inguinal region for some time. Pain very intense if she coughs or sneezes, and pressure in the inguinal region is unbearable. The uterus is small and retroflexed, os small and pointing backwards. The appendages on right side apparently normal ; on left side ovary soft and twice as large as the right, and in the position of left fallopian tube was a tense, smooth, cylindrical swelling about two inches long, and of the diameter of an ordinary little finger. A vessel could

be felt pulsating between the roof of the vagina and this swelling."

On reviewing these specimens I would more especially wish to bring before your consideration an interesting point, viz., the presence of a tubal decidua, present in two of Dr. Cleghorn's specimens, also in the specimen which Dr. Edis has kindly allowed me to exhibit to-night from the museum of the Chelsea Hospital for Women. It is not seen in the other two specimens, probably from disorganisation by blood clot. The presence of a tubal decidua has been denied by some writers, but is undoubted in these specimens and in one of them, Specimen D, there is the cast itself from both tubes in connection with the uterine decidua. This leads to the interesting question, whether in tubal gestations it is present always in both tubes, and how far it is present in normal uterine gestation. Specimen D seems also to bear on the question of tubal abortion, for if the uterine end of the tube is sufficiently patent to allow the passage of an apoplectic ovum and tubal cast, it is reasonable to suppose it could occur in the other direction also. As far as I can see in these specimens, the abdominal ostium is not closed, and the fimbriæ, though united by some peritonitic adhesions, are not completely closed over the ostium. While admitting, therefore, the possibility of tubal abortion, it seems the probabilities are against it and due to mechanical causes; the symptoms probably are inseparable from true rupture, and it is therefore more profitable to study the clinical symptoms of early tubal gestation. I would point out, however, that Specimen A shows the fallopian tube to be distended with blood clot with no evidence of the ostium being open. Whether blood was escaping through it in the recent condition I cannot say. Before leaving the pathological considerations I would point out two other points in Dr. Edis' specimen. First, rupture has occurred in the upward direction, as the attention of this Society was directed to, at its last meeting, by Mr. Taylor. It was pointed out by Mr. Whittridge Williams, of Baltimore, in one case that the gestation sac had no connection with the

lumen of the tube—that gestation had occurred in an accessory duct above the true lumen. I myself showed a microscopic specimen at this Society of a tube showing an accessory duct, and I have met with it pretty frequently in the examination of numerous tubes. The presence of these ducts and gestation in them must be borne in mind, and possibly explain the rupture as in Dr. Edis' case in an upward direction. I believe myself that the weakest point anatomically of the fallopian tube is at its inferior border, and that it explains the more common rupture into the broad ligament, and also the reason why, mechanically, tubal rupture is more likely than tubal abortion. Another point in Dr. Edis' case is, the extremely interesting one, how the ovary, reduced as it is to a mere unilocular cyst, could have produced an ovum capable of impregnation, as undoubtedly it had done in this tube. Some time ago, I showed at this Society numerous microscopic specimens of ovaries in advanced stages of inflammation. I ventured then to suggest that in all of them, as there must have been in Dr. Edis' case, there were remnants of healthy tissue, and that as long as the tubes remained patent we need not despair of the organ performing its function satisfactorily and under the most adverse circumstances. Dr. Edis' clinical notes of this interesting specimen are identical with the symptoms noted in Dr. Cleghorn's cases, and is one more help in the positive diagnosis of tubal gestation.

Passing then to a review of Dr. Cleghorn's notes on these cases, and comparing them together, as Dr. Cleghorn has carefully tabulated them, it seems important to consider the facts which lead to the diagnosis of tubal gestation in the early stages, and to differentiate them from threatening normal abortion, perimetritis, and ovaritis. In one of these cases (No. 4) operation was successfully accomplished before rupture had taken place, and Mr. Taylor, at your last meeting, brought forward similar cases. Referring to Dr. Herman's case, in which Dr. Herman diagnosed and operated before rupture, Mr. Bland Sutton says in his recent work, that "it is as yet without parallel," and it is of great clinical importance to

emphasise the signs on which Dr. Cleghorn relied for his diagnosis, and which I have summed up as follows :—

- (1) Usual signs of pregnancy ill defined or absent.
- (2) History of sterility or abortions.
- (3) Menstruation missed.
- (4) Uterus enlarged, sound to three inches, uterus displaced to opposite side, and either ante- or retro-flexed.
- (5) Bimanual evidence of tumour or increased breadth of vaginal wall.
- (6) Fulness in Douglas' pouch. (In every case there was coloured fluid or blood in pelvis.)
- (7) Tenderness to touch of vaginal roof.
- (8) History of paroxysms of pain, localised to either inguinal region or lower abdomen, with intervals of little amiss.
- (9) Pulsating vessels, which were present in every case, and which must be considered as a most important positive physical sign.
- (10) Hæmorrhage from uterus, which it is important not to confound with menstruation.
- (11) Passing of decidual casts or shreds, without progressive dilatation of cervix.
- (12) Blanching, fainting, and collapse. Retention of urine.

With these symptoms, taken collectively, before one, it seems certain that it is useless to temporise, or to keep the patient under observation ; abdominal section and exploration is the only rational procedure.

Dr. Cleghorn ends his paper by saying : "If it had not been for the papers and discussions in the *BRITISH GYNÆCOLOGICAL JOURNAL*, I think it probable the condition would not have been recognised in any of these cases."

This tribute, I need hardly add, must be very gratifying, not only to the Fellows of this Society, but to Dr. Fancourt Barnes, to whom, as then editor of the *Journal*, the paper and specimens were sent. I trust I may assure Dr. Cleghorn that his work will be duly appreciated by this Society, and that his carefully detailed notes will be a valuable addition to the literature of the subject.

Dr. EDIS added some clinical details to the case mentioned by Dr. Shaw Mackenzie. The diagnosis of right tubal gestation was made, and immediate operation was suggested two days before the fatal rupture took place. Although the mammary signs were slight, they were distinct, the breasts having become fuller than was usual to her. There were a few veins mottling the surface. The areolæ were darker, and the follicles more marked than she had ever noticed them before. The cessation of the catamenia for forty-five days was an almost unprecedented occurrence with her. She had been married five and a-half years and had no children, nor had there been any history of miscarriage. The first attack of severe pain occurred on the forty-fourth day from the cessation of the normal period. A sanguineous discharge from the vagina commenced the next day, and lasted for twenty-three days consecutively. It was on account of this she consulted Dr. Edis. The vaginal examination disclosed the presence of a tense cystic mass, the size of a tangerine orange, in the right *cul-de-sac*, pushing the uterus over to the left side. The uterus was bulky, anteflexed, the cervix conical but giving the impression of being softer than normal. On conjoint manipulation there was a distinct feeling of fulness in right *cul de sac*, over and above the mere cystic enlargement, and it was tender on pressure. The pulsation of the vessels in right broad ligament seemed more marked than usual. There was a sanguineous discharge exuding from the os uteri, and there was a clear history of her having passed shreds and clots shortly after the first attack of pain. As it was thought desirable to wait and watch before operating, this was done with the result that another attack of severe hæmorrhage occurred before the abdomen was opened, and although the ovary and tube were removed and the abdominal cavity washed out, the patient never rallied from the operation and died ten hours afterwards.

Dr. FANCOURT BARNES said the mammary glands did not in themselves always give definite information as to the presence or absence of pregnancy. He had that afternoon

removed a large ovarian tumour from a patient five months pregnant. He had suspected the existence of pregnancy before the operation, and had, for that reason, made a careful examination of the breasts, but they presented no signs of pregnancy, and were extremely small and flaccid.

Dr. HEYWOOD SMITH said the thanks of the Society were due to Dr. Cleghorn for his valuable paper, and no less to Dr. Shaw Mackenzie for his interesting notes on it. One of his most important observations was that relating to the passing of the ovum into the uterus, as the fimbriated extremity of the oviduct being the softer and more dilatable it would have been expected rather to pass that way. It helped to show the conservative action of natural functions. He trusted that in the letter of thanks that would be forwarded to Dr. Cleghorn it would be mentioned that it has greatly gratified the Society to hear that their JOURNAL had proved of such value to a distant brother practitioner.

The Society then adjourned.

*ORIGINAL COMMUNICATION.**Proposed Registration of Stillborn Children.**

By ROBERT RENTOUL, M.D.

BEFORE speaking of the evils arising from the absence of a law providing for the registration of stillborn children, I shall first refer to those Acts which regulate the present system of registration of births and deaths.

I do so because the Act refers to the burial of stillborn children; because registration should be carried out by the present registrars; and because a study of the Act may prevent us from perpetuating some of its recognised flaws.

As regards the registration of births and deaths, we see that the legislation regulating it has been built up piece by piece, no effort having been made to deal comprehensively with it. Previous to 1836 registration was carried out by the clergy who kept parish registers. After this the 6th and 7th William IV., was passed, and by it the office of Registrar General and District Registrars was formed. By this Act registration was voluntary. To rectify this, the Act of 1874 was passed and by it registration was made compulsory; penalties for neglecting to register being provided. Referring to the registration of births the law enacts that notice must be given to the Registrar within 14 days by any of the following persons. A., the father and mother, B., the occupier of the house in which to their knowledge the birth occurred, C., the person present at the birth; D., or the person having charge of the infant. The informant signs the register and pays a fee of three pence for a copy of the certificate. The penalty

* Read before the Manchester Medical Association, May 6th, 1892.

for neglecting to register is £2. Attention is called to this because I shall later on show that a declaration made by any of the above is all that is required when a supposed stillborn child is to be interred.

Regarding the registration of deaths any one of the following must notify the fact of death. (a) The relative of the deceased present at death or in attendance during the last illness ; (b) the nearest relative resident in the sub-district ; (c) any person present at the death ; (d) the occupier of the house in which the death occurred ; (e) the person causing the body to be buried ; or (f) the coroner by order when an inquest has been held. Notice of death must be given within five days next following the death, the informant signing the register. The informant generally takes a certificate of the cause of death signed by a registered practitioner, which the registrar retains, giving a certificate of the registry to the informant, who finally, or through the undertaker, delivers it to the person who buries the body, or performs any funeral service over the body.

From the above it appears the law is more concerned in having the fact of death registered than the cause. Thus according to the 53rd Annual Report of the Registrar General, 562,248 deaths were registered, but of this total the cause of death was certified by registered practitioners in only 514,710 cases ; 31,587 were certified by coroners after holding inquests ; while 15,947 were not certified, 25,883 deaths were entered under the ambiguous heading "ill defined and unspecified causes." These figures show that the cause of death is not certified medically in a large proportion of cases. For instance, take the cases certified after a coroner's inquest. Here the fact is not mentioned whether a *post-mortem* has been made or if medical evidence was called. And remembering some of the findings of coroner's juries, such as, "found dead," "death from natural causes," or "death from visitation of God," we can form an idea of the value of a coroner's certificate of the cause of death. Again, take the cases over which the coroner is given power by Section 3 (1), of the Coroners Act, 1887, to order the registrar to register a death when no inquest has been

held. This includes all "reported to the coroner independently of the registrar." To explain, a child is found dead and the fact is reported to the police, no medical certificate of the cause of death is obtained because previous to death the child was not under medical treatment. Here the police constable steps in, asks a few questions, sends off his report to the coroner, and the latter on receipt of this report sends a certificate to the registrar stating that he "does not consider it necessary to hold an inquest respecting such death." A special form of certificate is provided by the Registrar General (see form). Again, notice those deaths referred to the registrar, and where no medical certificate of the cause of death is obtained. Here the registrar asks some questions of the informant and if satisfied registers the death, adding it is "not medically certified." If the registrar is not willing to accept the risk he refers the case to the coroner who orders his officials to make inquiries. If this officer is satisfied, so generally is the coroner, and no inquest is held. Such systems are open to greatest abuse. The abuse springs partly from the fact that the coroner does not wish to increase the costs of his office, and because the police do not care to interfere unless they are certain of obtaining a conviction if a prosecution is instituted. They are aided by some coroners who seem to think their whole duty is to detect a crime and not to find the cause of death.

These defects would be removed if (a) the office of registrar of births and deaths were held by medical practitioners—as is the case in Ireland; (b) if the medical certificate of the cause of death were sent by practitioners *direct to the registrar* and not to the relatives, and that it would be illegal for any practitioner to use any form of certificate for the cause of death other than provided by the Registrar General; (c) if no body could be buried until the death has been registered; (d) if the informant's signature to the fact of death had to be witnessed by two witnesses; (e) if the law provided for the payment of the certificate of the cause of death; and (f) if the medical certificate of the cause of death were so altered that the practitioner be called upon to certify

of his *own knowledge* that the person of whom he has given a certificate of the cause of death is *actually dead* instead of stating "he is informed" the person is dead. I think our present certificate could be so altered, because Section 44 of the Act of 1874 provides that it shall be lawful for the Local Government Board by order to alter from time to time, all, or any of the forms contained in the Schedules of the Acts from 1837 to 1874, or to prescribe new forms, or to revoke and alter any regulations.

It would be much better if a medical inspector were appointed to examine the dead body when no medical certificate of the cause of death is obtainable instead of sending a police constable or a coroner's beadle to do this. In France and Germany, and in Brussels, Vienna, Switzerland and other continental countries, the law enacts that every dead body without exception must be examined by a medical inspector—while no body can be interred until this has been done.

In Paris, the Mayor appoints a medical officer for each district, and when a death occurs it is reported to the civil authorities. These communicate with the medical inspector and await his reply. In this country, the bodies of stillborn children should be visited and reported upon. Also at least all deaths registered under "ill-defined and unspecified" causes. It would be best if the Medical Officers of Health were appointed to act as medical inspectors. In Denmark by the "Inspection of the Dead Act," 1878, all dead bodies, stillborn included, are inspected by legally qualified medical practitioners.

The only part of the Births and Deaths Act which refers to the burial—not the registration—of stillborn children, is Section 18. After enacting that a person shall not wilfully bury, or cause to be buried, the body of any deceased child as if it were stillborn, it goes on to enact that "a person who has control or ordinarily buries in any burial ground shall not permit to be buried or bury in such burial ground any stillborn child before there is delivered to him either a written certificate signed by a registered medical practitioner that he was in attendance at the birth of the child or that he has examined the body. If

such a certificate cannot be obtained, then a declaration provided for in the Act must be made and signed by some person who would, had the child been born alive, have been called upon to certify, that is the father and mother, or the occupier of the house, or the person present at the birth, or the person in charge of the child, or an order of the coroner when he has held an inquest. Any person contravening this Section may be fined £10.

A "book of forms of medical certificates of stillbirths," was issued by the Registrar General's office to registrars of births and deaths as late as March, 1891. These books are free to medical practitioners. Each certificate consists of two parts, one to be filled up when the practitioner was present at the birth, and the other when he has examined the body but was not present at the birth. Both require him to certify that the child was not born alive and that the woman named was delivered of a child; two difficult questions to answer as will be seen when we consider the signs of stillbirth. The certificate is handed to the person having control over the burial ground and not to the registrar of births and deaths (see book of forms). When no medical certificate is obtained, the person bringing the body for interment must sign a declaration stating that the body is the child of so-and-so, that no practitioner was present at the birth, that no practitioner has examined the body, and that the child was not born alive. This is signed by the informant and retained by the sexton (see form).

These regulations for the burial of children supposed to be stillborn are very imperfect. The burial—if burial there be—takes place without the intervention of the registrar of births and deaths and frequently without a medical certificate. Who controls the burial? The Act refers to the person "who has control over or ordinarily buries bodies." When this person is the superintendent of the burial board cemetery a certain supervision is provided. But when the grave digger or parish section is the parish official how can there be any feeling of security? Supposing this person is shown a certificate said

to be signed by a registered practitioner does he know whether it is or is not a proper certificate? The person legally permitted to sign the declaration is "*any person* present at the birth or the person in charge of the child." Suppose it is signed by some old woman or unqualified assistant. I ask—what protection does such a declaration give to the public that many children born living, are not interred as stillborn, or that they have not been subjected to some *malpraxis* during or soon after birth? Thus, any person can prevent a child, which is being born, from breathing, put it in a soap box, take it to the parish sexton, make a declaration that the child has not lived, give the sexton a few coppers and the *murder* is completed. At present, very few prosecutions take place. In 1890, only nineteen prosecutions under the Births and Deaths Acts were instituted by the Registrar General, and only one for permitting a child to be buried as stillborn without a certificate that such was the case. One prosecution!

I shall next try to answer the question, "How many stillborn children are interred each year in England? When in 1890, a Midwives' Registration Bill was introduced into the Commons, to enable women to practise midwifery without their having either a medical or surgical qualification, and therefore, placing them on a different footing to other midwifery practitioners, it occurred to me that this strange proposal should be opposed, until at least provision had been made for the efficient registration of stillborn children. In order to arrive at some knowledge as to the number interred, I wrote to some 100 Burial Boards, asking each, "What number of stillborn children had been interred?" I found that at 71 Burial Board Cemeteries in England and Wales, 6,321 stillborn children had been interred. In 1890, Dr. Cameron called attention to this statement, in the House of Commons, and moved for a Return showing the number interred in Burial Board Cemeteries in England. This Return was issued in July, 1891, and we must thank Dr. Cameron and the Right Hon. C. T. Ritchie, President of the Local Government

Board, for it. From it, we learn that in 1133 Burial Board Cemeteries, 17,333 children, supposed to be stillborn, were interred during twelve months; and that 4,569 of these were buried without a medical certificate. This Return is very incomplete, as it does not include Ireland or Scotland; neither does it give us any account of those interred in the parish or other burial grounds. And in connection with this, I have been told that the parish churchyards are the commonest receptacles for stillborn children. According to the "Official Year Book of the Church of England," there are 13,988 benefices in England; and if only half of these benefices, not to mention those in Scotland and Ireland, have churchyards attached, we see what an enormous quantity of stillborn children must be interred in them. It is impossible to give any idea of the number thrown into ashpits, or sewers, or buried in gardens, or burned. (See Return.) A painful feature brought out is, that the number of interments in certain large towns is very great. Thus, in Lancashire: Blackburn had 298 such interments; Bolton 262; Burnley 197; Preston 150; Rochdale 130; Warrington 113; Oldham 285; Walsall 154; Handley 148; Newcastle 267; Liverpool 383; London 2,121; Salford 294; and Manchester 299. These figures do not include all interred, as there are burial grounds in Manchester other than Burial Board Cemeteries. Of all burials in the above, one in every 13.8 buried was a stillborn child. The above figures give us but a glimpse as to the number interred. Farr, when giving evidence before the Committee on the Protection of Infant Life, in 1871, estimated that there were from 30,000 to 40,000 stillbirths in England, each year. With our present population, the number cannot be less than 60,000. Had the ages of the stillbirths been given in the Return, I venture to say it would have shown that almost all interred had reached the full term of nine months.

If children under the seventh month of pregnancy and abortions were included, then at least 178,164 must be added to the total; that is, supposing as I have tried to show, in my work on "The Causes and Treatment of Abortion," the number of abortions to the total births is 1 in 5.

An instructive addition to this Return would have been statements, showing what proportion of illegitimate children had been stillborn. It is well known the illegitimate child, from its very conception onward, has to run the gauntlet of many attempts upon its life, which the legitimate child has not to encounter. Statistics prove that the number of stillbirths among illegitimate births is much greater than among the legitimate. In the *British and Foreign Medical Review*, No. 7, it is stated that the proportion of stillbirths among legitimate children, basing the calculation upon 8,000,000 of births is 1 in 18, or 1 in 20; while among the illegitimate and immature it is 1 in 8 to 1 in 10. Bertillon states that the chance of an illegitimate child being stillborn, when compared with the legitimate, is as 193 to 100. In "Denmark, its Medical Organization and Hygiene," it is stated that of 100 legitimate births 2.6 per cent. are stillborn; and of the illegitimate 4.1 are stillborn. It may also be stated that in first labours 1 in 11 are stillborn, and in other labours 1 in 32, and more males than females, in the proportion of 56 to 44. I have mentioned these facts because any certificate of stillbirths should state the age and sex of the child, and whether its mother was single or married.

Referring next to the number of stillbirths, I may say that in—

Country.	Year.	Stillborn.	Total Births.	Proportion to Population.
Prussia	... 1889	42,084	1,094,668	1 in 26.01
France	... 1875	43,834	880,579	1 in 20.08
Netherlands	... 1890	7,374	150,529	1 in 20.4
Switzerland	... 1890	3,072	78,548	1 in 22.2
Sweden	... 1890	3,557	132,069	1 in 37.4
Denmark	... 1889	1,933	66,239	1 in 34.2

It will be readily seen that the total number of stillbirths must vary in each country, according to the legal definition of "stillbirth," as, if one country enacts that all stillbirth over six months be registered; while another fixes the age at seven months or at eight months, a great difference will be shown in the figures. It is to be remembered that in France, all

children, liveborn and others, who die before being registered, are entered as "stillborn." The custom in Denmark until 1860 was, that all those dying within twenty-four hours after birth, were registered as stillborn.

A reference to the laws regulating the compulsory registration of stillbirths in European countries, shows that this country is very far behind. In the Netherlands, registration is made compulsory, by Article 32 of the Civil Code. In Switzerland, Section 14 of the Federal Law, December 24th, 1874, regulates the practice. Only those conceptions of six months are registered, and they are registered both as births and deaths. In Germany, registration is carried on by the registrars of births. Stillbirths are registered as deaths. (Act, January 6th, 1874.) Their law does not define the term "stillbirth," but in practice, only a fœtus of seven months is capable of living, and those born before that age are not registered. Paragraph 23 of the Act enacts that "when a child is born dead, or dies during birth, the fact must be notified by the next day at latest." Any one failing to comply with this regulation may be fined £7 10s., or be imprisoned. Two special forms for registering a stillborn child are supplied. In one, the fact that the child died during birth is noted; while the other is used in these cases where the child is born dead, *i.e.*, died in the womb. Abortions and mole conceptions are not registered. When the informant registers a stillbirth, the registrar interrogates the informant as to whether the child died during delivery, or died in the womb. In Greece, registration is not compulsory, and no penalties are laid down. They are registered as deaths, and their legal definition of a stillborn child is, "a dead newly born child." It would appear that the body of every newly born child must be taken to the registration officer, unless its birth has been registered before as a livebirth. The Act, of October 29th, 1856, regulates the procedure. In an Appendix to the Act, there is a form relative to the showing of a stillborn child to the registrar. In Denmark, registration is compulsory by the Act of January 2nd, 1871. It is performed by the registrar of births and deaths. A penalty of

10 kr. is imposed if the death is not registered; and if a midwife fails to register, she is fined 10 kr. (1 kr. equals about 1s.). By a stillborn child is understood a child which has issued forth from its mother after the expiration of the twenty-eight week of gestation.

A special form of certificate of stillbirth is provided for the use of a midwife.

Having tried to give some idea of the number of stillbirths I shall next proceed to answer the question, "Is the criminally causing of children to be stillborn, frequent?" Coroner Braxton Hicks, in his pamphlet, "Hints to Medical Men granting Certificates," says, "many children who are termed stillborn are not really so, but have been born alive and died soon after, sometimes from natural causes, but also from suffocation and other illegal means. In fact, it is to be feared that many children termed stillborn, are disposed of in such ways." Tidy, in his "Legal Medicine," says, "so notorious is it that a large number of these cases could be averted, that some legislation is urgently needed." Stevenson, in his "Medical Jurisprudence," says, "there is reason to believe that the non-registration of births of children born dead, leads to many being disposed of as stillborn, which really came living into the world, but have died from neglect, exposure, or violence." In the Return already referred to, the following pointed statement occurs: "The Secretary of State has reason to believe that in some places the practice prevails of entering in the cemetery book as stillborn, children who have survived their birth by only a few hours, and over whose body no religious service has been performed." In the *Lancet*, of October 11th, 1890, a writer states, "that a midwife known to him signs a declaration of stillbirth of those children who die within five or six hours after birth." Previous to the passing of the Births and Deaths Act, 1874, and when no penalties were imposed for burying liveborn children as stillborn, the custom of burying liveborn children as stillborn was common. I have met with a case where a woman ruptured the membranes, the os being dilated to a small extent only, in the hope that by so

doing, the labour would be so delayed that the child would be stillborn. Again, it is well known how easy it is to prevent a child from taking its first breath. Stevenson says, "a wet cloth may be placed over the child's mouth, either during birth or afterwards, and before or after the performance of respiration." I have been told of a case where a midwife had a large number of "stillbirths" in her practice, and she was found to have placed a hollow sponge (cup-shaped) over the child's mouth and nose, so as to prevent it from breathing while being born. It is well known how easy it is to allow the fully born living, but non-breathing child, to lie on the bed, without making the slightest endeavour to make it respire, and that such want of action can not be uncommon among a certain class. Also, that many children are stillborn because the mother allows herself to remain in labour for too long a time before calling in aid. It has been suggested that one reason why efforts are made by some to have dead, liveborn children interred as stillbirth is, that by so doing, the burial fees are greatly lessened.

If a stillborn child can be interred for 1s. 6d., and a live-born child for 10s. 6d., we may expect this to make a difference. Perhaps if we had the system of burial by municipal authorities as in Germany, there being no private undertakers, and where the funeral of a child is carried out for about 3d., this would meet the above argument.

A practitioner, who has watched the practice of midwives, writes me as follows: "there exists a deplorable (might one not say criminal?) amount of negligence in the treatment of "apparently" stillborn children. I have repeatedly saved children that have been thrown aside by the diplomated midwife. The whole system is shocking."

A strong incentive to the criminal causation of stillbirth is *illegitimacy*. In 1890, of 890,937 births in England and Wales, 38,412 births were illegitimate; or about 1 in every 22 births. This shows there is a large field for criminal stillbirth business. I ask, what father, or pregnant woman of an *illegitimate* conception, would not pay a large sum to anyone

who guaranteed that the child was to be stillborn? The experience of our police in coroner's courts answer. We know that large quantities of drugs are consumed so that the child may be stillborn, and that in every city the professional abortionist makes a large income. Is it likely then that when these methods fail, not to mention the many "checks" used to prevent conception, that others will not be used when the child is being born? The fact that in this country, a woman condemned to death, cannot have her execution stayed unless they prove she has quickened, encourages the present disregard for infant life in the womb. That is, the infant in her womb, although a living child is legally not worthy, in such a case, of any consideration. The plea of pregnancy in bar of execution holds good only if quickening has taken place, the vulgar idea being that the child receives life only when the woman quickens. Otherwise, not only she, but the child in the womb are both killed. It would be well if some Member of Parliament would raise the question, "Has the Crown the right to take the life of the child in the womb of the woman condemned to undergo the sentence of death?" In France, this law does not exist; for there the proof of pregnancy, not of quickening, is sufficient to stay execution.

It may be suggested that the Act relating to the concealment of birth, lessens the value of the demand for registration. By the 24th & 25th Vict., chap. c., it is enacted that "if any woman be delivered of a child, every person who shall by any secret disposal of the dead body of the said child, whether such child died before, at, or after birth, endeavours to conceal the birth thereof shall be guilty of a misdemeanour, and being convicted thereof shall be liable, at the discretion of the court, to be imprisoned for any term not exceeding two years with or without hard labour." The object of the Act is to prevent secret disposal, with a view to child-murder. It refers to a child which dies either before, during, or after birth. It is not a crime to conceal the body of a live child, unless it die before the fact of its birth was made known. The body must also be secretly disposed of; and this weak point, as it has been

stated by a judge, that because a woman disposed of her child in a field from which she must have been seen from the public road, she did not "secretly dispose" of it. Again, a great deal depends upon the definition given to the term "child." Justice Chitty has said it is no offence if the child so concealed was only seven months old—a somewhat strange ruling seeing the child is viable before the seventh month. Another judge has laid it down that it is not a "child" unless it could live when born; while a third has said that if it had the outward form of a child, this is sufficient.

In a proposed "new Criminal Code," drafted by Sir J. F. Stephen, late judge, it was suggested that "no foetus is to be deemed a child within the meaning of this section, which has not when born reached the period at which it might have been born alive." I also call attention to above Act, because some practitioners give very wrong advice regarding the disposal of premature births, stillborn or otherwise. Kinkead, in his "Medical Practitioner's Guide," says, "if any practitioner secretly dispose, or aid, or abet, at such disposal, he is guilty. It is also criminal to conceal the birth of a putrid foetus; because the Act refers to a child which dies before birth, as well as those dying during, or after birth.

The Scottish and the German laws go further than the English. By the 49th George III., chap. iv., "concealment of pregnancy," not of birth, is criminal. It enacts, "that if any woman shall conceal her being with child during the whole period of her pregnancy, and shall not call for, and make use of help and assistance in the birth; and if the child be found dead, or missing, the mother may be imprisoned for two years." This law lays it down that it is the duty of every pregnant woman to make preparation for her confinement and infant. I have asked Littlejohn if he thinks the words "during the whole period of pregnancy" would exclude those women who concealed their having aborted, or miscarried. He refers me to McDonald's "Criminal Law of Scotland," 2nd edition, 1877. It appears the Act refers to all cases, but that it would be a very strong point in the woman's favour, if she had been de-

livered of an abortion or foetus ; if so, she would be outside the statute. The Act asks that the child be *found dead*. Therefore the child must have been born alive ; or in other words, pregnancy must have lasted so long as to make a living birth possible. In Scotland there is no Act corresponding to our "concealment of birth ;" and neither the Scottish nor the English Acts lessen the force of our request for registration.

Having referred to these Acts, I shall try to define some terms of which we must have clear ideas before any legislation on the subject of registration of stillborn children is entered upon.

What is a "stillborn" child ? This may be met by asking another. What is a "liveborn" child ? The medical and legal definition unfortunately differ greatly, physiology and law being in direct conflict. Medically, the child from the instant of conception has life. In legal language, the live-born child is one whose body being "completely born shows some definite sign of life." In this definition there are two expressions which must be considered, viz., "completely born," and a "sign of life." To be "completely born" it is necessary that the entire body of the child be born, but it is not necessary that the placenta be delivered, or the cord divided. Legally therefore, as long as the child is in the womb, it is not a living being, and so it is assumed that every child is born dead until evidence to the contrary is produced. Next, "What constitutes 'a sign of life ?'" The fact that a child after its complete birth—not during—has been observed to move a limb, or a muscle to twitch, that the cord has been seen to pulsate, that its heart has been felt, or heard to beat, that its cry has been heard, or that it has been seen or heard, to show any physiological sign of life, or vital action, is legal evidence that the child has been liveborn. It need be scarcely added, that had the child been born dead, it could not show any of these signs of life. From the legal view of livebirth, it is not necessary to prove the child has breathed, as a child has been known to live for some hours without breathing. Neither is the fact that the lungs sink in water, a proof that the child has

legally lived. It has, unfortunately, sometimes been held that breathing is a complete sign of livebirth, but a child may breathe before being completely born, as when the head only is outside the vulva. Breathing, when coupled with complete birth, is only one of the signs of livebirth, and so a child may legally live although it has not breathed. Further, the law does not ask that the child born alive shall be a "viable" child; that is, one capable of living for some time after birth. It only asks that the child after complete birth has been observed to show "a sign of life." And if this sign last for one part of a minute, the law is as satisfied as if it had lasted for a year. Nor does it ask whether the child is mature, or immature, healthy or diseased; for both immature and diseased can live. It will be seen that in the great majority of confinements, only those present at the birth can give any useful evidence as to the livebirth of a child. If the evidence of livebirth is to rest upon information obtained only through *post-mortem* examinations, if I may be allowed to use the term, then it must be owned it is very difficult to state positively that the newly-born child has been stillborn. I use the term "newly-born child" as applicable to those twenty-four hours old. The condition of the lungs, state of the cord, appearance of the centre of ossification in the inferior femoral epiphysis, state of kidneys, bladder, and bowel, do not often supply us with that amount of evidence which a judge and jury would think it right to convict upon. The importance of these facts are enforced because the charge of murder cannot be brought against any person who prevents a child while being born, from breathing. The law holds that the child in the womb is dead in so far as proving livebirth is concerned, and therefore that the child cannot be killed. Consequently it follows that a child can be murdered, *i.e.*, prevented from breathing and living during birth, while all the culprit has to say is, "the child was stillborn." Such a state of the law is a direct incentive to crime, and places a high premium upon child murder. In fact, in one case, a woman who cut a child's head off while it was being born

was acquitted. No doubt, if a person maliciously injure a child during its birth, so that after it is completely born, it dies from the injury, this is murder. But such do not refer to those incompletely or stillborn. In cases of criminal abortion also the charge is not one of murder.

The next question for consideration in relation to legal livebirth is: what is the earliest age at which a child when completely born can show "a sign of life?" For the answer to this question must depend our answer to the other; down to what age of intra-uterine life should stillborn children be registered? in some countries, as Switzerland, only such stillborn children as have completed the sixth month of intra-uterine life are registered. In Denmark those attaining the twenty-eighth week must be registered. In their "Midwives Register," they are entered under one of the two headings, (1) those stillborn, *i.e.*, those dead in the womb; (2) those born alive but asphyxiated and not resuscitated, a most practical and important distinction. In that country in the five years—1883 to 1887—33·6 per cent. of stillborn children were dead before birth, *i.e.*, exhibited signs of maceration. In the Netherlands no legal definition is given.

But if complete delivery coupled with the performance of some vital act by the child be a sign of livebirth, then stillborn children under the sixth month must be registered. Barnes states that children which have completed the fourth month when born may live for some hours. Athill informs me he has seen a child under four months breathe after birth. No doubt children of this age die soon after birth, but for the purposes of registration the question of the duration of life after birth need not be entered upon. The question of intra-uterine age might be ignored if for the purposes of registration it were enacted that all stillborn conceptions expelled from the womb and having the outward form of a child were to be registered. If it be held that only those stillborn children of 9, 8, or 7 months viable children be registered, we accept the barbarous admission that because a child has not attained the seventh month its life is not to be considered. My definition of a stillborn child

would be "a child which before, during, or after its birth has not shown, or does not on examination of the body shew, any sign of life." For purpose of registration I would define a "child" as a conception born after four months of pregnancy, the pregnancy being dated from the last day of the last period. Consequently every stillborn child of four months and upwards would be registered. The present Registrars of births and deaths should register stillbirths, and those persons already mentioned as having the responsibility of notifying deaths should also be called upon to notify stillbirths. No stillborn child should be interred until a certificate of registry from the registrar of deaths is presented. Penalties for neglecting to register should be provided. Some may suggest that both the birth and the death should be registered—such being the custom in Switzerland. In Sweden, the birth is registered. In Germany, France, Belgium, Denmark and Greece the death is registered. I think we should register the death only and not the birth. It should be registered within twenty-four hours after delivery, two witnesses to the fact of birth and death being required by the registrar. In Berlin, and Brussels, the office of the registrar is open on Sunday as well as on other days. Heavy penalties should be provided for the punishment of those who use any means which cause the child while being born to be stillborn. Against those who fail to use every means to induce the newly born child to breathe, penalties should be provided. While those who burn the bodies of newly born children or dispose of them in any way other than burial in a burial ground should be fined. For reasons already stated the medical certificate of stillbirth should contain particulars of the sex, date of confinement and address at which it took place, whether the confinement was natural or artificial, mode of presentation of the child, measures used at the confinement, name of medical practitioner present at the birth or name of other person present, number of family, number of previous stillbirths, length of gestation, if the child shewed any sign of life, (a) before, (b) during, (c) or after birth, legitimate or illegitimate, name and address of father and mother, cause of death, signature of medical practitioner.

In Sweden, the sex and legitimacy or illegitimacy of the child are entered under the column containing the christian name, as stillbirths have no such name. It would be well if we followed the example of France and Germany, and tried to have it provided that the body of every stillborn child be inspected before burial by the medical officer of health or other practitioner. In Brussels, the birth of a stillborn child is notified to the civil office. This office makes out a list of all the deaths daily and sends this to the *medecin de l'etat civil*. This official must call before 10 a.m., at the house at which the stillbirth lies and must examine it carefully. If he comes to the conclusion that it has died a natural death he fills in a report, and has it forwarded to the *hotel de ville*. If he is not satisfied he sends this report of verification of death and identity to the police authority. No burial can take place in this case until authority is given by the *hotel de ville* or by the police. Printed instructions are issued by the *hotel de ville* to the medical official. Articles 6, 7, 8 and 9 of these lay it down as follows :—" If the body present any indication of death from violence or other suspicious circumstance, he must give notice in writing at once to the office of the civil state, as well as to the division police, (7) he shall transmit to the police at the same time the certificate of verification of death, notifying that permission to bury must not be given without the authority of the police and to inform the relatives of such notice. (8) The verification of the death of the stillborn or of newly born infants requires more careful examination by the medical official. He must state on his certificate to the civil authorities whether the infant was dead before or died during or after birth, and in the last case how long it lived after birth. (9) If he thinks the child is not dead he himself is to proceed at once to use all measures and at once to inform the doctor who attended the child, and in all cases he must not fill up his certificate of verification until he is certain of the decease even supposing another visit is necessary." The system in force in Paris is almost similar to the above. In Switzerland, stillborn children although registered are not inspected.

It may be said the cost of carrying out the registration of stillbirths would be too great. The cost of the medical certificate of the cause of death is according to Farr one-and-sixpence to the country. If then 60,000 stillbirths were registered each year, at this cost, surely the country would not object to pay the small sum of £4500 a year.

It is the duty of the medical profession to bring this question to the front. The time is ripe for a public protest against the gross indifference of women of all classes—rich and poor—to the child in the womb. The present state of affairs is a public scandal. A class of political economists may go about saying the human animal is a glut in the market, and so not having the value of a pig, calf, or sheep, it may conveniently be placed upon that little list from which they hope it will never be missed.

On the other hand our words and actions must be made to give a strong colour to public thought, to instil the knowledge that from the moment of conception there is life, that this life has the right to claim our protection and that our duty must be to bring about the registration of stillbirths.

In some respects, the protection of child life in the womb and during birth is on the increase. Thus in the charge of criminal abortion such can hold good if attempts to procure abortion have been made upon a conception but a few days old. Again a child of four months old if legally born alive can inherit property and have money left to it. Here registration of livebirth or of stillbirth is of the greatest importance. Tenancy by "courtesy," also depends upon the birth of a living child.

But, on the other hand, the charge of infanticide cannot be brought if a child is killed while being born. And here I may say it would be more human and more worthy of an even professedly civilized community, if the recommendation of the Harveian Society on infanticide were adopted, and that for the purpose of conviction complete separation of the child from its mother were not required, but proof only that the child was living during birth and that it had died from violence. By

the Prussian code, any woman who intentionally kills her illegitimate child either during or after birth is charged with infanticide. Although in this country infanticide is murder, still this charge is very frequently reduced to that of concealment of birth. In the suggested new criminal code already alluded to, it was proposed that if any person cause the death of any living child which has not proceeded in a living state from its mother they shall be liable to penal servitude for life.

If we bear in mind the difference in the medical and legal definitions of what a livebirth is, that from the legal view the child performs some vital act outside its mother's womb which very same act it performed when in her womb, we can see that the difference is one of locality only, and not of vitality.

And if we can induce our law-makers to extend further official recognition to the child in the womb, by passing an Act for the registration of all stillborn children, then we, as medical practitioners, possessing the power of harmonising lay with medical science, should be able to say we had not altogether neglected our duty towards this important subject.

In concluding this paper, I wish to express my thanks for the information received from Her Majesty's representatives abroad, relating to the different laws upon this subject.

REVIEWS, &c.

The *American Journal of Obstetrics* for January, 1892, contains an interesting paper by Dr. J. SCHMITT on "Perimetric Cysts of Inflammatory Origin." The favourite seat of serous peritonitis is in the pelvic peritoneum. It may develop acutely after childbirth and gonorrhœa; usually, however, it complicates some chronic inflammatory condition of the tubes, the ovaries, or the adjacent peritoneum. The phenomena are the same we meet in every peritonitis—fever, pain, vomiting, and tympanites. The characteristic feature, however, of the disease is produced by its location, together with the formation of a tumour containing serous fluid. Local examination at the beginning of the disease reveals merely a tender swelling in the pouch of Douglas, or at the side of the uterus. In a short time—sometimes after the lapse of two or three days—we are surprised at the rapid increase in the size of the inflammatory swelling. The entire pelvis may be filled with serous exudation, and Douglas's pouch form a convex tumour bulging into the vagina and pressing the uterus forwards against the symphysis. The cyst may occupy a higher level to the right or the left of the uterus, or it may be entirely independent of the uterus, in the iliac region. Several cysts may exist at the same time.

The first stage of the disease is characterised by the symptoms of an acute inflammation with serous effusion. The second stage is marked by a cessation or remission of an irritative phenomena, and an attempt on the part of the organism to bring about the absorption of the exudation. This may be accomplished, and eventually no trace be left except the above-mentioned chronic inflammatory conditions of the genital tract, which were the primary cause of the serous peritonitis.

On the other hand, the serous effusion may persist for an extraordinary length of time. The originally diffuse inflammatory mass is absorbed, with the exception of the fibrinous layer immediately surrounding the fluid. This becomes organised and forms a dense wall around the fluid, bound by firm adhesions to the adjacent viscera. The patient may be convalescent, and the presence of the cyst give rise to but little annoyance. In the absence of a knowledge of the previous history of the case, the diagnosis will then be one of great difficulty. In aspiration we have an excellent remedy to shorten the duration of inflammatory cysts which remain stationary for a long period. It is not necessary to empty the cyst completely, since a partial withdrawal of the fluid frequently accelerates the absorption of the remainder. Aspiration may be employed when the cyst lies in immediate contact with the anterior abdominal wall, or bulges into the vagina.

In the February number of the same journal, Dr. A. PALMER DUDLEY contributes a paper on "Fæcal Fistula following Laparotomy." Dr. Dudley has collected statistics of seventy-four cases. In the vast majority, the prime cause of the accident was extensive adhesions in the pelvis, in the breaking up of which some injury was done to the coats of the intestine, and the injury had been overlooked at the time of the operation. The next most frequent cause of fistula was the indiscreet or improper use of the drainage tube. A third cause, he believed, was the use of cat-gut sutures for repairing an injury of the intestine.

Of the various forms of pelvic disease for which laparotomy was resorted to, and in which fistula afterwards developed, diseases for which Tait's operation was performed head the list, numbering thirty-three of the seventy-four, while tubercular peritonitis and parovarian cyst occupy second and third place in point of occurrence.

It was often found difficult to fix the exact location of the fistula. In thirty it was thought to be in the sigmoid flexure of the colon or rectum; in seventeen through the small

intestine; two through the ascending and one through the descending colon. In the remainder it was uncertain. It is to be regretted so little positive information could be obtained concerning this point, for upon our ability to locate correctly the seat of injury to the gut must largely depend our methods of treatment for its relief, and our prognosis of future immunity from trouble.

He believes that unless the case be one of pyo-salpinx or some sort of suppurating disease within the pelvis in which the injury to the bowel has already taken place, such an accident may be prevented by using sufficient care, and attention to detail when making the primary operation.

Of the seventy-four cases collected by him, thirty-nine healed spontaneously or under some form of medical treatment. The treatment must necessarily consist of remedies which will stimulate a closure of the tract by granulation, but the secret of success is the proper management of the bowel as a whole—to keep it well emptied, free from gas, and above all, to keep the fistula well irrigated.

Should all attempts to close the fistula by such methods fail, then the question of treating it by surgical means arises. In the seventy-four cases reported, secondary operation for cure was made eight times; three proved successful, three were failures (the fistula not being found), and two died from the operation.

In the number for April Dr. CUSHING warmly advocates vaginal hysterectomy for cancer. He has performed the operation thirty-one times. Two died from the immediate effects of the operation, and a third on the tenth day from pulmonary embolism.

“In regard to ultimate results, subtracting from the whole number of thirty cases in which the operation was performed for cancer, the two who died from the operation, and three cases, including the one above mentioned, where the whole of the diseased tissue could not be removed and one of which died, there remain twenty-five cases in which, with greater or less difficulty, the whole uterus was removed and the clamps

applied to apparently healthy tissue. Three of these operations have been performed within the last nine months, and are therefore unavailable as far as regards the question of recurrence. At any rate, the patients are doing well so far. Of the twenty-two other cases which recovered and which have been operated on for a year or more, five are dead and two will soon die from recurrence of the cancer. The other fifteen are in excellent health, as well as the three recent cases above referred to. With a single exception the convalescence was extremely easy and uneventful." Dr. Cushing may be congratulated on these results, but we cannot help thinking that he will find reason to modify his views before long. He speaks of the difficulty attending the diagnosis of cancer in the early stage, but considers the suggestion that cases which do not recur are due to an error of diagnosis, to be a simple insult to the judgment of the operator, and to the pathological knowledge of the whole modern scientific world.

"There are certain limitations to the operation of vaginal hysterectomy. The first contra-indication is serious disease of other organs, especially of the heart or kidney, or the presence of such great weakness from cachexia or loss of blood as to render it improbable that the patient can withstand the shock of the operation. *The latter condition, however, can often be overcome* by a preliminary operation, whereby the diseased tissues are removed by the curette and cautery, so that after a few weeks of rest in bed, with proper care and good food and tonics, the patient is in a condition to undergo the radical operation. When this is to be performed, the first point is to ascertain whether the disease has invaded either broad ligament to such an extent as to have passed beyond the point where the clamps or ligatures can be applied. *This point can usually be determined* by examination through the rectum, especially when the uterus is drawn down by forceps. When the uterus cannot be drawn down the operation will certainly be difficult, although the adhesions which hold the organ may not be malignant in their nature, but the results of old pelvic inflammation or of disease of the

uterine appendages. When the cancerous affection has involved the vagina or the tissues about the rectum or bladder *to any considerable extent*, vaginal hysterectomy is contraindicated. In all such cases, it is not to be inferred that surgery offers no prospect of relieving suffering and prolonging life." The italics are ours.

Dr. PAUL F. MUNDÉ gives his experience of oöphorectomy for the cure of hystero-epilepsy. He has operated in five cases. "Women, chiefly young girls, have occasionally been brought to me with true epilepsy which was supposed to depend upon some derangement of the menstrual function or some disease of the uterine appendages. I have seen a fair number of such cases, but in no instance was I able to detect on thorough examination any disease of the appendages or any connection between the functions of ovulation and menstruation and the epileptic seizures; of course in such cases I invariably refused to advise or perform oöphorectomy."

"But as regards the so-called hystero-epileptic convulsions my position is somewhat different. By hystero-epileptic convulsions, I mean seizures of an epileptic character which occur near or at the menstrual periods, and appear to depend upon, or at all events to be connected with, the functions of ovulation and menstruation. These attacks differ from the true epileptic seizures in that the patient is rarely thoroughly unconscious, seldom froths at the mouth, and, after a more or less speedy recovery from the attack, is entirely herself again, and does not fall into the deep sleep which usually follows true epileptic attacks. Besides, if the patient happens to be seen during such spurious epileptic seizures, firm pressure over both ovarian regions with the fingers, either *per vaginam* or through the abdominal walls or bimanually, will usually succeed in immediately reviving her. In true epilepsy no such result is to be expected. Further, the continuance, even for years, of the hystero-epileptic attacks does not, as a rule, affect the patient's mental condition, and she remains mentally as sound as she was at the beginning of the illness. In this respect also the spurious form differs from the true variety

of epilepsy. I should say that it is not always easy to differentiate between the two varieties, except in aggravated cases of true epilepsy, where there can be no doubt whatever as to the diagnosis. To repeat, I do not consider true epilepsy ever to call for the removal of the ovaries with a view to a cure of the disease."

In four of the cases operated on, the result was most successful.

The *Annals of Gynæcology and Pediatrics* (Philadelphia), for June, contain an article on endometritis considered clinically by Dr. CHARLES P. NOBLE. He expresses his opinion that "Endometritis is especially important in the category of diseases of women, because, almost without exception, it forms one stage in the progressive inflammatory or septic processes which eventuate in salpingitis, ovaritis and peritonitis. Therefore the curative treatment, or, better, the prevention, of endometritis constitutes a very large part of the prophylaxis of pelvic inflammation in women. If endometritis could be prevented, or could be cured early, before the inflammation has spread to the tubes, it is no exaggeration to say that the number of sick women would be reduced one-third, and the number of those seriously sick would be reduced two-thirds."

He divides the disease into three varieties, which he considers can be distinguished clinically—"gonorrhœal, septic and simple." It is a matter for regret that he gives no information as to the manner in which he makes this clinical distinction in actual diagnosis.

Dr. CORDIER, of Kansas City, contributes a paper on the importance of early surgical treatment of cancer. The author advocates the radical operation, in every case, on the very intelligent ground that by the time the disease is recognised it may have spread far beyond the tissues apparently involved. He states that Dr. Joseph Price has performed forty-nine vaginal hysterectomies with only one death. He quotes the

following table of cases of total extirpation of the uterus from Professor Martin's work :—

	Cases.	Deaths.	Per cent.
Fritsch	60	7	9
Leopold	42	4	10
Olshausen	47	12	25
Schröder	74	12	16
Staude	22	1	5
A. Martin	66	11	16

Finally he gives the following graphic account of the manner in which Dr. Price performs this operation :—"Your patient is prepared as for an ordinary 'section,' with the addition of a thorough vaginal douching the night before and at the time of the operation. The bladder is emptied an hour before the patient is placed on the table, which is not done until she is etherized. There is less danger if comparatively empty, and enough urine will be secreted within the hour prior to and during the operation to act as your guide as to whether the bladder has been injured. Place your patient in the lithotomy position, with the nates well over the edge of the table. You need two assistants besides the nurses. The assistants handle the sponges, speculum, volsella, &c., as the operator directs. The operator, seated, washes the external parts, and thoroughly irrigates the vagina with a 1 to 1,000 bichloride solution, seizes the cervix, if there remains enough sound structure to hold on to with the volsellum, and draws it down to the vulvar orifice, or as far as it is possible, with moderate force. If there is much sloughing of the tissues the major portion of the diseased mass is scraped away by the curette, and the vagina irrigated again before proceeding further. The operator, taking a short-bladed knife or a pair of scissors, slightly curved on the flat, makes a complete circuit of the cervix, as close to the vaginal vault and as far away from the diseased structure as it is possible to go with safety to the surrounding structures, as the bladder, ureter, rectum or uterine arteries.

"The posterior vaginal vault is now opened by a dissection with the index finger, and the peritoneum opened with blunt

scissors. Having entered the peritoneal cavity, sweep the finger from side to side and find out the relation of the various structures. You now make your dissection very carefully between the bladder and the uterus, having opened the peritoneum anteriorly and posteriorly, using the index finger as a guide, apply the large clamp forceps to the broad ligament, keeping close to the uterus lest you include the ureter, and divide the structures along the uterine face of the forceps to within half an inch of its point. If the tube and ovarian ligament are not included in the grasp of the forceps, and you are going to leave them in, guide a second forceps over these structures and divide them, trusting the clasped forceps to the assistant at the side of the patient corresponding to the structures divided, and cautioning him to make no traction, but to simply hold the instruments parallel, thus giving the operator more room to work while treating the other side in a like manner. After all the structures are severed, the uterus is usually delivered with very little difficulty. If much trouble is experienced at this stage, the uterus may be delivered quickly by using a miniature pair of obstetrical forceps. If the uterus is very large it is the wiser procedure to perform the supra-pubic operation of total extirpation. After delivering the uterus the vagina is irrigated and packed with gauze to prevent friction and to hold the handles parallel. This gauze acts as a drain, and these cases always drain profusely—thanks to nature's lesson taught here in drainage. The forceps are allowed to remain on from thirty-six to forty-eight hours; at the expiration of this time the forceps are *unclamped* but *not removed*; by this precaution you have them in position in case there is manifested a tendency to hæmorrhage (an accident of rare occurrence at this period); and by a delay of a few hours after unlocking the handles a softening process takes place in the crushed and surrounding tissues allowing the instruments to be removed with ease and very little pain to the patient. If it is necessary to remove the appendages (and I believe this should be done in every vaginal hysterectomy as a precautionary measure, the risk of leaving

in diseased tubes will be thus avoided, and the pain and uneasiness produced by ovulation gotten rid of), after applying the first forceps as described above, the second one is placed so as to just take in the round ligament, and the broad ligament is pulled down so that the bite of the forceps takes in the structures to the infundibulo-pelvic ligament; the tube and ovary are now easily (sometimes not so easily) removed along with the uterus."

The Brooklyn Medical Journal for January contains interesting notes of a case of ptyalism in pregnancy by Dr. O. A. GORDON. Few of the text books give any information as to the occurrence, causes, or cure of this condition.

"Playfair says a profuse discharge from the salivary glands is an occasional accompaniment of pregnancy. It is generally confined to the early months, but occasionally continues during the whole of gestation, and resists all treatment, only ceasing when delivery is over.

"Lusk says incessant flow of saliva to the extent of two or three pints in the course of a day has been observed. Small doses of atropin, pilocarpin, viburnum prunifolium have been severally recommended.

"Cazeaux says it rarely lasts more than two months. In a large portion of cases ptyalism ceases spontaneously, for no confidence can be reposed in the measures generally resorted to for its removal. Some advantage, however, may be derived from the use of aromatic infusions and astringent gargles. I have found it useful to have the patient keep a piece of sugar candy constantly in the mouth, lumps of gum arabic, pieces of ice, &c. It is useful to be acquainted with these various measures, if only to keep up the patience of the sufferer by varying them from time to time until the discharge ceases of its own accord.

"The views of these writers are in accord with most writers on the subject.

"Mrs. X., aged 30, born in United States, applied to me for treatment for salivation of pregnancy in the first month of

her fourth pregnancy, stating that she had been troubled in the same way in her previous pregnancies, and that persistent treatment had failed to give her the slightest relief. Also, that her great-grandmother had given birth to nine children; grandmother, four; mother, five, and that profuse ptyalism had persisted during the whole nine months of each of these pregnancies. Fifteen months previous I had operated on her for a large rectocele, and she was, at the time of becoming pregnant, wearing a pessary for retroversion of the uterus and prolapsed ovaries. General health good. There was a constant flow of saliva from the salivary glands, requiring the incessant use of a handkerchief or a vessel for its reception. She complained of great dryness of the throat and inability to swallow the saliva. This was accompanied by vomiting, the constant dribbling interfering with digestion and sleep, to such an extent that the patient became considerably emaciated and weakened. Naturally of a neurotic temperament, her nervous system was considerably shattered at the close of gestation. I tried an astrigent gargle, ice in the mouth, atropin, pilocarpin, bromides and counter-irritation over the parotids. In fact, I nearly exhausted the materia medica in my efforts to give her relief. I also tried stretching the cervical canal, and the application of comp. tincture of iodine to the cervical endometrium, all of which afforded her not the slightest relief, the trouble continuing until one week after delivery at full term."

In connection with this, a valuable paper by Mr. WILLIAM ELLIOTT, L.D.S., in the *Birmingham Medical Review* for July might be noticed. The author mentions this condition, and suggests that the excessive flow of saliva may be caused by the acid matter regurgitated from the stomach, which stimulates the glands. He calls attention to the great frequency with which caries of the teeth takes place during pregnancy, and, moreover that the teeth become softened and loosened in the alveoli; the former condition apparently being ascribed to abnormal acidity of the saliva, and perhaps the latter is due to

an excessive absorption of the lime salts in the mother to provide for the building up of the foetal frame. The author calls attention to the frequency of toothache and neuralgia during pregnancy for which no apparent cause can be found in the mouth, and *inter alia* mentions another interesting case which is recorded ("Amer. Syst. Dent.," p. 444, vol. 3) of pain in a tooth during labour. The woman was the mother of five children; nothing unusual had occurred in previous labours, which were of about eight hours' duration. During this labour, the pain suddenly left the back and uterus and appeared in a tooth, the pain being paroxysmal and similar in character. Chloroform relieved it, only to re-appear in the uterus; when the anodyne had passed off it appeared in the tooth again and again; but pain was not felt in the two places at one time. During this, no progress was made in the labour. Twelve hours passed, and the woman, becoming exhausted, the tooth was removed, when the child was born in an hour.

In the *Edinburgh Medical Journal* for February, Dr. ROBERT FELKIN quotes a number of cases of "Influenza amongst women in which abortion or menorrhagia had coincidently occurred." He considers influenza to be dengue fever modified by climate. It is noticeable that in nearly all his cases a papular eruption was present, and the temperature was high. He considers the uterine disturbance could only have been caused by (a) high temperature, (b) ovarian irritation, or (c) reflex irritation due to the eruption. We would venture to suggest a fourth possibility. There is a general feeling amongst those who have seen most of the disease that influenza might not inappropriately be termed "nerve fever." There can be no question as to its specific consequences upon the nervous system. It therefore appears to us to be more than probable that the ovarian congestion and the expulsion of the contents of the uterus are referable to precisely the same reflex nerve disturbance by which we should account for the injection of the conjunctiva, the roseolous rashes, or the vomiting, which are such common symptoms.

The same number of our contemporary contains an article on "The Pathogenesis and Treatment of Oöphoritis," by Dr. ROBERT BELL. He contends that inflammation and subsequently hyperplasia of the ovary is, as a rule, secondary to morbid conditions of the uterus, amongst which he appears to consider endometritis and laceration of the cervix the most important factors. Dr. Bell goes so far as to state that where there is laceration of the cervix and oöphoritis occurs it is invariably found on the site of the cervix which is lacerated. Considering how very frequently the laceration is bilateral, both ovaries according to this theory should be very often affected. Finally, Dr. Bell states that in his experience "the ovarian affection in every instance disappeared very rapidly after the rent in the cervix had been repaired, and not till then." It would be interesting to know if this has been the experience of other gynæcologists.

The journal for March contains a valuable article by Dr. HALLIDAY CROOM upon "Asthma Gravidarum." He points out the well recognised fact of the occurrence of attacks of asthma in hysterical cases during menstruation and pregnancy, and narrates with graphic force a well-marked example of the latter condition which came under his care. A lady two months pregnant who had had no vomiting, but, apparently instead, suffered from violent attacks of asthma, during one of these she aborted, and had no further recurrence of the asthmatic trouble.

Dr. J. W. BALLANTYNE writes on "Studies in Foetal Pathology and Teratology." The author conclusively proves that very little is known at present concerning this subject, and that it would be well for it to be carefully investigated. In the July number of the Journal he gives a careful description of "General Dropsy of the Foetus." He promises further contributions in this direction which should be valuable and interesting.

Dr. ALLEN T. SLOAN describes most minutely and carefully an extreme case of Hystero-Catalepsy in a girl nineteen years of age, with trances lasting fifty-eight, thirty, twenty-

four, and twelve hours, after which the patient seemed subject to fixed delusions, was sent to an asylum, and finally completely recovered.

In the *Journal* for June, Dr. N. T. BREWIS gives an account of two cases of Vaginal Hysterectomy for Sarcoma of the Uterus, one of which died. In each case the microscopical examination placed the nature of the disease beyond doubt.

Dr. THEOPHILUS PARVIN contributes a clinical lecture to the *International Medical Magazine* for June on the "Influence of Maternal Impressions upon the Fœtus." He quotes a large number of well-marked cases which seem difficult of explanation except upon the hypothesis that the mental emotions of the mother can react on every square inch of the superficies of the fœtus.

The *Montreal Medical Journal* for February has a valuable and interesting article by Dr. WILLIAM GARDINER upon "Pregnancy with Ovarian Tumour." The following are the conclusions at which he arrives :—

"1. The association of pregnancy and ovarian tumour, if left to nature, is fraught with danger to the woman, whether the termination be premature or at full term.

"2. When left to nature, abortion or premature labour may occur, in either case with frequently fatal result to the mother.

"3. When the case proceeds to labour at full term, the result to the mother may be rupture or such other injury to the tumour that fatal peritonitis carries her off.

"4. Tapping of the tumour, while it may temporarily relieve tension, is by no means free from danger by injury to the uterus or otherwise, and it does not cure the patient.

"5. Ovariectomy with modern precautions is nearly as safe as in the non-gravid condition of the uterus, while the woman is at once cured of a disease which must ultimately demand operation.

"6. The second case here related shows that serious complications, such as torsion of the pedicle and consequent peritonitis

with adhesions, necessitating the use of the drainage-tube for so long a period as five days, does not necessarily lead to abortion.

"7. Ovariectomy in the present state of surgery, in the great majority of cases, must be the only proper treatment, and is often urgently demanded to relieve tension.

"8. The indication for the operation in the case of small abdominal tumours is even more urgent, because of their great liability to torsion of the pedicle; and in the case of pelvic tumours, by reason of the almost certain rupture or necrosis from compression during labour."

The *Montreal Medical Journal* for April contains an article by Dr. MCGANNON on "Extra-uterine Foetation," which gives an excellent summary of our present knowledge of the subject.

*SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS.*

GYNÆCOLOGY.

VAGINAL

Vaginal Secretions.

Dr. J. WHITRIDGE WILLIAMS, of Baltimore, gives a *résumé* of Doederlein's (of Leipsic) excellent work on vaginal secretion.

In young girls, virgins, unaffected by disease, he found the normal vaginal secretion to be a small quantity of whitish, crumbling material, of the consistency and appearance of curdled milk; containing no mucus, and giving an intensely acid reaction to litmus paper. Microscopically, it consists of vaginal epithelial cells and a large quantity of large bacilli.

The pathological secretion he found to be yellowish or greenish-yellow in colour, and of cream-like consistency, and often containing gas bubbles or particles of mucus; its reaction was weakly acid or neutral, and sometime alkaline; microscopically, it consists of epithelial cells, many pus-cells, and a mixture of all kinds of micro-organisms.

The secretions from 195 pregnant women were examined, and $55\frac{8}{10}$ per cent. had normal and $44\frac{1}{10}$ per cent. had pathological secretion. Of these the primiparæ showed the largest percentage of normal secretion, namely, $65\frac{7}{10}$, whereas the multiparæ had only a percentage of $38\frac{8}{10}$, and in private practice the normal secretion exceeded the pathological.

A bacillus was found only in the normal secretion, and can be cultivated only upon sugar bouillon and agar-agar.

It produces an acid thought to be lactic acid and with great rapidity, and to this the normal acidity of the vaginal

secretion is due. The products of the life of this bacillus appear to be fatal to most of the pathogenic organisms. Pus introduced in large quantities producing organisms in four days had entirely disappeared. This bacillus was proved to be non-pathogenic and therefore could not produce sepsis.

The pathological secretion possesses marked pathogenic properties, as proved by inoculating eighteen rabbits. In eight out of eighty-seven cases streptococci were found. As the streptococcus is usually the cause of puerperal fever, we may conclude that even in the pathological cases only in 10 per cent. is auto-infection probable.

Doederlein does not consider that the streptococci are able of themselves to invade the uterus and produce infection, and he believes that even if they are present in the secretion they need to be carried there by some manipulation or other. When found, and in the lying-in hospitals of Leipsic a routine of examination by microscope is required, no examination or vaginal injection is permitted.

In cases where pathological secretion is found, he uses a 1 per cent. solution of lactic acid, which favoured the growth of the vaginal bacillus. (*American Gynæcol. Journal*, May, 1892.)

UTERINE.

Carcinoma of the Cervix Uteri in the Negress.

This interesting case (by J. Whitridge Williams, M.D., *Johns Hopkins Hospital Reports*, vol. ii. p. 224) is probably the first one of its kind reported. The patient was a dark swarthy-skinned, *full-blooded* negress, 38 years old, married for sixteen years. Had eleven children, youngest nine months old; never miscarried; all labours normal, and nursed all her children.

Three months after birth of last child she first noticed *metrorrhagia*; had constant daily flow and pain in abdomen and back. Extensive infiltration was found, involving the uterus, broad ligament, &c. The most that could be done in

the way of treatment was by curetting. A microscopic examination of the scrapings confirmed the diagnosis.

A second case was seen in the dispensary of the hospital in a "brown negress," aged 48. (*International Med. Magazine*, May.)

What Effect does Electro-therapy have upon Fibro-myomata?

In a paper with this title (*Deutsche med. Wochenschrift*, No. 2, 1892) MARTIN and MACKENRODT report 36 cases treated according to Apostoli's method, with the following results: In no instance did the growth disappear. A positive diminution in the size of the tumour could not be demonstrated. Most of the patients, after several months' treatment, were relieved as regarded hæmorrhages, and in some instances pain, but were usually obliged to resume the treatment. In upward of 40 per cent. of the cases, electricity had no effect on the growth, and the general condition of the patient became worse. Three patients died while under treatment, two of septic peritonitis (in one laparotomy was performed, with removal of the suppurating tumour), and one of profound anæmia following repeated hæmorrhages.

Analysing the most recent statistics of Keith and Schäffer, the writers find that of 212 cases, in 32 per cent. the symptoms were relieved; in 44 per cent. they became worse, and 9 patients (4.3 per cent.) died. In no instance did the tumour disappear. Moreover, the so-called "symptomatic cure" was only permanent when the patient was near the menopause at the time of the treatment; before this period the hæmorrhage frequently occurs.

Granting that electricity is a palliative means of treating fibroids, it remains to inquire why the results are so variable. The explanation is to be found in the histological peculiarities of the tumours in different cases. Thus among 356 cases treated by Martin in his private hospital, in 53 the tumour was cystic or malignant; in 23 there was accompanying disease of the uterus (cancer or pregnancy); in 43 marked disease of the adnexa. Since most of these complications

could not be recognised before the abdomen was opened, it was evident that there was some risk in the electrical treatment. As regards the extirpation of the myomatous uterus, the writers report 20 cases of laparo-hysterectomy with 2 deaths (neither from sepsis), and 14 cases of vaginal extirpation, with no deaths. Including 5 successful cases of enucleation, the entire mortality is 5 per cent, as compared with 4 per cent. with the electrical treatment. Considering the difficulty, loss of time, and discomfort to the patients attending the latter, and the fact that in more than a third of the cases they become worse, the writers have entirely abandoned it. Fibroid tumours which give rise to only slight symptoms receive no local treatment at all. If serious disturbances are present, the patients are operated upon. (*Amer. Journ. of Med. Sciences*, May.)

A. MARTIN and MACKENRODT publish their experience with electrotherapy in the treatment of myomata in the *Deutsche Medicinische Wochenschrift*, No. 2, 1892. Sixty-six cases were treated. In the first group (55.5 per cent.), for the most part with small tumours, the results were favourable in so far as hæmorrhage and pain were lessened and the general condition was improved. On the other hand—

1. There was no case in which the tumour disappeared ;
2. Nor was the size of the tumours diminished, beyond all doubt.
3. In twenty of the thirty-six cases, the menopause occurred during the treatment, with regressive changes in the tumours.
4. In twelve, the improvement was not entirely permanent.
5. In 44.5 per cent. there was no improvement at all ; the condition of the patients grew worse, and three cases, 8.3 per cent., died during treatment.

On the ground of their experience and that of others, the authors reject the Apostoli treatment of myomata.

Dr. G. BETTON MASSEY publishes notes of some fibroid tumours treated by electricity with remarkable results, with almost complete cure in each case ; cases four and five being thus described :—

"An irregular multinodular growth, extending one and a half inches above the umbilicus and larger than an adult head, disappeared entirely under intra-uterine treatment, leaving a nodule the size of a small cherry on the posterior wall of the uterus.

"An intramural growth reaching the umbilicus and complicated by hæmorrhagic endometritis and ovaritis; reduction to size of small lemon under treatment."

Treatment of Fibroid Tumours of the Uterus by Injection of Ergot.

J. SCHNECK (*Medical Age*, April, 1892) gives the histories of three cases of uterine fibroids treated by injections of ergot into the substance of the tumours, with satisfactory results, and states that several other cases are still under observation. The preparation of ergot, used, is a good fluid extract, in half drachm doses, and the instrument employed is the hypodermic syringe, with a long needle, a small aspirator having been used in a few instances. It is desirable to make the injection into the centre of the tumour as nearly as possible. No evil effects have been noticed after the treatment. In a few instances a chill, followed by moderate fever, occurred, but these symptoms disappeared after a few hours. In one case reported there was an intramural fibroid encroaching upon the cervix, and about as large as an orange, in a patient 42 years old. Profuse menorrhagia had existed for five months, and ergot and other astringents by the mouth had failed to control it. Injections of half-drachm doses of ergot into the tumour daily for eighteen days, and every second or third day, afterwards, for the following month, caused the bleeding to cease. Menstruation became regular, there was no inter-menstrual bleeding and the patient felt well, although there is no note as to the condition of the fibroid.

Another patient, of about the same age as the first case, had profuse menorrhagia following a miscarriage, for the control of which ergot was given by the mouth, with no success.

An examination revealed the presence of a large fibroid in the right lateral wall of the uterus. By use of an aspirator needle the injections of ergot were given once a week for nearly five months. The hæmorrhage was controlled during this entire period, and at the end of this time the tumour was found to be extruded into the uterine cavity, attached to a thick pedicle, and was removed by the *écraseur*. The tumour was so large that the wire could not surround it, and several portions had to be cut away first. There was but slight bleeding during its removal, probably due to the action of the ergot diminishing its vascularity. The substance of the tumour was soft and friable, and probably it would have broken down and liquefied in a short time. The third case was one of fibroid tumour in the posterior wall of the womb, which had made such traction upon the fundus as to cause inversion of that organ with procidentia. The injections were practised once a week for two months, and at the end of this time the tumour began to suppurate and discharge freely. After thoroughly disinfecting the parts, the uterus was replaced and kept in position by a pessary. (*Amer. Jour. Med. Sciences*, May.)

On the Treatment of Fibroid Tumours.

This paper is the result of the treatment of 689 cases since 1868. Of this number 409 of the cases are alone available for deductions, the remainder, by reason of too short a time under treatment, or of too recent date, are valueless.

The tumours were classified under the headings "Very Large," reaching above the navel, "Medium," size of a child's head, and "Small;" not, as is usual, into *subserous*, *inter-parietal*, and *submucous*.

Further, it is important to distinguish between those which appear near the climacteric, or after forty, and those which develop sooner, and finally to ascertain the way the symptoms exhibit themselves and the effect of treatment upon them. As the author's arithmetic seems to us to be somewhat mixed, we omit his percentages.

The methods employed were (1) *baths* with the addition of concentrated saline water (2), ergotin injections, and (3) electrolysis, the latter used after the methods of Apostoli. With the baths alone, cessation of growth was noted in 53 per cent., in 23 per cent. there was a perceptible diminution, and in 18 per cent. there was complete recovery. Twenty-one cases were treated also by *electrolysis*; there was diminution in 33 per cent., cessation of growth in 43 per cent., and no improvement in 23 per cent.

Where hypodermatic injections of ergotin were used and in some the internal administration of ergotin as well, in 62 per cent. the general condition decidedly improved, 25 per cent. completely recovered, and the treatment had no effect in 13 per cent.

The author states, "Of the numerous and in many instances very severe cases which have been sent here for treatment, so far as I know, in four cases only myomotomy, and in six cases castration, was necessary, while in five, enucleation of the descending tumour was required." In his summary of treatment the author alludes to the fact that small and lethargic tumours need little or no treatment except general hygienic measures and rest during menstruation.

The administration of one-half grain of ergotin, and the daily watching digestion, may be substituted, provided there be no menorrhagia. It would then be contra-indicated. Menstruation in cases of fibroid is apt to be extended to the fifty-fifth or fifty-six year.

In severe cases the energetic ergotin treatment is advisable, associated with the baths, which latter must be "strong and long-continued." (Dr. Engelmann, of Kreuznach, *Edin. Med. Journ.*, November, 1891.)

Hysterectomy.

In Chrobak's Clinic of late the following is briefly the method pursued in cases of uterine myoma. Ten successive cases have been submitted to operation, and all re-

covered. Careful antiseptic preparation of patient, vaginal douches, cleansing of the same and cervix uteri with pads of cotton wool soaked in solution of corrosive sublimate (1 per cent.), iodoform stems in uterine cavity, and iodoform gauze in vagina. Laparotomy, turning out of tumour, separation of infundibuliform and broad ligaments on all sides to the margin of the uterus, section of peritoneal folds in connection with anterior and posterior walls, separation of peritoneum and bladder in front and of the same membrane behind to a point a little above the vaginal insertion. Constriction with elastic ligature, and removal of tumour. Deep cauterization of stump, and suture of same, with 2-3 deep stitches over iodoform gauze tampon in vagina. Removal of gauze, introduction of sharply-curved grooved sound, the flattened top of which is pressed firmly by an assistant against posterior wall of cervix. The posterior fornix is made tense with forceps or hooks, and incised along groove of sound, and 3-4 transverse sutures are inserted to close the opening. Under guidance of a finger, introduced from above, ligation of broad ligaments, &c., close to cervix and section with scissors, care being taken to leave a good-sized pedicle and a small portion of cervix. Individual ligature of any large arteries in the stump. Division of anterior fornix, and treatment of same as for posterior fornix. Then either suture of vagina (without including peritoneum) or introduction of wick or gauze drain by means of long sound passed from above; the sound is withdrawn through vagina, and the latter lightly closed with iodoform gauze just covering the wick. Then suture of pelvic peritoneum, beginning laterally, the serous membrane being thereby made to cover the ligature stumps and close all fissures between folds of the ligaments: the vagina, open or not, being covered with peritoneum. Closure of abdominal wound by staged suture. The advantages of this method are very obvious. They consist, as compared with the extra-peritoneal method, in shortening of the period of convalescence, avoidance of long suppuration of the suspended stump, and of ventral hernia.

It is safer, compared with the intra-peritoneal method of Schroeder, owing to the absence of a sunken secreting cervical stump liable to undergo necrotic change (Lihotzky, *Wien. Med. Woch.*, 1891, No. 27).—Alex. Fränkel in *Centralb. für Chirurgie*, 1892, No. 4.

Intestinal Obstruction due to Displacement of the Uterus.

NÉLATON (*Nouvelles Archives d'Obstétrique et de Gynécologie*, 1892, No. 2) reports the case of a woman, aged 28 years, previously in good health, who during a menstrual period was seized with severe colicky pains in the abdomen, and vomiting, which persisted for three days, efforts to move the bowels being unsuccessful. Tympanites was excessive. On the fifth day gas escaped *per rectum*; on the eighth, the patient had a fluid movement, and no further obstruction was noted until the menses reappeared, when the symptoms of intestinal occlusion again developed. A rectal examination now revealed a cicatricial mass compressing the rectum at a point two and a-half inches above the anus; the induration was continuous with the uterus, and was thought to be the remains of an old hæmato-salpinx. It was situated so deeply within the pelvis that it seemed to be more accessible through a vaginal than through an abdominal incision. The *cul-de-sac* of Douglas was opened from below, and adhesions attaching the retroflexed uterus to the rectum were divided, when the former was readily replaced. Examination *per rectum* then showed that the obstruction had been removed. The patient was discharged at the end of two weeks, and never had a return of the trouble.

SEGOND (*Ibid.*) reports the case of a patient, aged 36 years, who presented all the symptoms of acute intestinal occlusion. Under chloroform, a retroflexed uterus with a supposed fibroid at the fundus was replaced, by introducing the entire hand into the rectum, and the obstruction was overcome. Several months later vaginal hysterectomy was performed, and the tumour proved to be an ectopic gestation, which was removed successfully. (*Amer. Journ. Med. Sciences*, June.)

TUBAL AND OVARIAN.

The Anatomy and Physiology of the Fallopian Tube.

MILROY (*Glasgow Med. Journal*, 1891, No. 6) has made investigations, the results of which are somewhat at variance with the prevailing views. He describes glands in the mucous membrane lining the fimbriæ, which secrete a viscid fluid when the latter grasp the ovary, the function of which is to cause more intimate union between them, and thus to prevent the ovum from escaping into the peritoneal cavity. On account of the number of folds in the mucosa, it seems hardly credible, he thinks, that the ovum is forced along the tube by its vermicular contractions. It is more probable that the ovum is drawn into the ampulla by capillary attraction, assisted by the motion of the ciliæ. The inner end of the ampulla, where the folds are scanty, seems to be the most favourable locality in which impregnation could occur. When impregnated, the writer suggests that the ovum is impelled by a "nervous force" (*vis nervosa*) through the isthmus into the uterine cavity. (*Ibid.*)

Growths of the Fallopian Tube.

WESTERMARK and QUENSEL (*Nordiskt Medicinskt Arkiv* 1892, Band ii., Heft 1) report the following rare case: The patient, aged 45 years, had enjoyed good health until a year before the operation, when she began to have metrorrhagia with abdominal pains. On examination, two hard nodular masses were felt, one above and one to the right of the uterus. Laparotomy was performed, and an ovarian cyst was removed from the right side. The corresponding tube was transformed into a solid tumour, two inches in diameter, while the left was hypertrophied and dilated, and contained a number of papillary excrescences. The patient gradually became weaker after the operation, but lived five months. At the autopsy cancerous enlargement of the retro-peritoneal glands was discovered, with metastases in the liver. Microscopical examination of the tubes showed them to be

the seat of alveolar carcinoma, which had evidently originated in the tubal mucosa. (*Amer. Jour. Med. Scien.*, June).

PARONA (*Ann. di Ostet. e Gin.*, 1892, No. 2) in removing the adnexa for the cure of uterine fibro-myoma, encountered a lipoma the size of a pear, from which was pendent a normal ovary. The tube was so imbedded in the tumour that only the fimbriated end was visible. It apparently developed from one of the fimbriæ. (*Ibid.*)

SPAETH (*Zeitschrift für Geb. u. Gyn.*, Band. xxii, Heft 2) reports the case of a patient from whom he removed a tube which contained a true interstitial fibro-myoma imbedded in its wall at a short distance from the uterine end. There were no evidences of chronic inflammation in the tube, so that it could not have been a case of so-called pachysalpingitis. (*Ibid.*)

Pyosalpinx rapidly following Gonorrhœa.

EDEBOHLS (*New York Journal of Gynecology and Obstetrics*, December, 1891) records the history of a patient who had specific urethritis set in four days after intercourse. Vaginitis, endometritis and double salpingitis rapidly followed, the latter being diagnosed on the tenth day after infection. At the end of four weeks, acute pelvic peritonitis occurred, and the enlarged tube was punctured and pus escaped. Five weeks after infection the appendages were removed. Section displayed a pelvic peritonitis, with abundant exudation, from which the left tube, containing about two drachms of pus, was readily detached, on account of its recent adhesions. The abdominal end of the tube was found to be widely distended, but glued to the wall of the pelvis. The appendages of the right side were also removed. There was no occasion for drainage, the abdomen was closed, and the patient promptly recovered. (*Univ. Medical Magazine.*)

Suppurative Oöphoritis.

BOLDT (*New York Journal of Gynecology and Obstetrics*, April, 1892) records the histories of seven cases of true

ovarian abscess. Some disorder of the puerperium (labour at full term, miscarriage or abortion) is usually responsible for the condition, although gonorrhœa, operations on the cervix and curettings, may also cause chronic ovarian abscess.

The condition begins as an endometritis or salpingitis, and these affections, plus an involvement of the peritoneal coverings, accompany the abscess and often mask its presence by their more prominent symptoms. It is only when an acute inflammation is, for some reason, added to the previous condition that the symptoms are sufficiently characteristic to enable a diagnosis to be made with certainty. Instead of the pain radiating from the ovarian region into the lumbar, sacral and hypogastric regions, or shooting down along the crural or sciatic nerves, it is more localized and steady, without intermissions. Fever, slight chills, rapid pulse and thirst are present.

Upon examination, the tumour is found to be larger, and fluctuation can be detected more or less accurately. The differential diagnosis must be made between suppurating ovarian cystomata, tubo-ovarian abscess, and parametric abscess. From the first it is impossible to distinguish it, unless the patient has been under observation previously, and the development of the trouble watched. From tubo-ovarian abscess it can be distinguished only by being able to separate the tube from the ovary. In parametric abscess there is more or less infiltration of the vaginal walls, and the mass feels firmer on the floor of the pelvis, and usually there is some bulging into the vagina. The prognosis of chronic ovarian abscess is not bad so long as no acute process develops, although the patient is practically an invalid. Fortunately there is usually an attachment formed between the ovary and intestines, and it occasionally happens that when an acute inflammation supervenes the abscess ruptures into the bowel instead of into the peritoneal cavity. As it is often impossible to make a correct diagnosis in cases of chronic ovarian abscess, the treatment must be that which is appropriate for ordinary ovaritis, peri-ovaritis or salpingitis, the

symptoms of which it resembles. But after such treatment has been pursued for a reasonable length of time without benefit, the proper plan is to open the abdomen and remove the diseased organs.

When, however, the diagnosis of subacute ovarian abscess is positively made, there must be no delay about operating. The methods of operating differ somewhat, according to the condition and position of the abscess. If the walls are thin and the gland adherent the contents must be aspirated before any attempt at removal is made, no matter whether the tumour be small or large. But when the abscess has reached a considerable size and is densely adherent and making its enucleation hazardous, it is better to ascertain whether the sac can be reached from the vagina, and, if so, to introduce a trocar from the vagina, guided by the aid gained from the abdominal incision, and, after draining the sac thoroughly, introduce a drainage tube and treat the case as an ordinary pelvic abscess. (*Univ. Medical Magazine.*)

Cyst Enucleation.

T. GAILLARD THOMAS (*New York Medical Record*, December 19, 1891) reports an interesting case of a nullipara, married three years, but never pregnant, although very desirous of having children. In addition to sterility, she complained of irregular and painful menstruation, pelvic neuralgia, extending down the thigh, depression of spirits, leucorrhœa and malnutrition. Examination revealed an anteflexed uterus with a tender and eroded cervix. The left ovary was enlarged to the size of a hen's egg, prolapsed and tender. The right ovary was as large as a small orange, prolapsed and firmly bound down. Laparotomy was performed and the left ovary readily removed, and upon examination was found to be studded with little cysts and the centre to be filled with blood, probably the result of an ovarian apoplexy. The right ovary with a thick-walled cyst, which existed between itself and its ligament below, and the

Fallopian tube above, was firmly adherent to the pelvis. The cyst had developed between the folds of the broad ligament, and instead of ligating the parts below the ovary and removing this organ with the cyst and Fallopian tube, Thomas (anxious to preserve the ovarian functions) introduced a bistoury into the broad ligament, and, guided by a grooved director, split it and carefully enucleated the cyst. A half dozen China silk ligatures were applied to the bleeding vessels and the opening in the broad ligament was closed with fine catgut. The ovary contained two cysts as large as cherry-stones. These were incised and their cavities gently touched with Paquelin's thermo-cautery at a white heat. Then the Fallopian tube which had been broken completely away from the ovary, was attached to it by a strong catgut suture and the parts returned to the pelvis. Patient had an uneventful convalescence, and menstruated painlessly at the next period. (*Univ. Medical Magazine*, June).

Remote Results of Removal of the Tubes and Ovaries.

DR. WHARTON SINKLER (*University Medical Magazine*) says:

"The remote effects of removal of the ovaries and tubes upon the general health are, as a rule, to improve nutrition and to better the strength, especially if the operation has been done for diseased ovaries or pus tubes.

"Excessive gain of flesh is rare, and change of voice, growth of hair upon the face, and loss of feminine characteristics do not occur.

"The sexual appetite in women is seldom changed by castration within two or three years after the operation, but after several years it becomes lessened.

"It is often the case that after this operation patients are more nervous than formerly, and mental disturbances of various forms, insanity and epilepsy, not infrequently follow it.

"The influence of the operation is sometimes good upon

insanity and epilepsy which are associated with severe dysmenorrhœa or occur periodically at the menstrual epochs; but when the insanity is constant, although it may be aggravated at the monthly periods, removal of the appendages is of no benefit. Hystero-epilepsy is seldom permanently cured by the operation. Prolonged after-treatment is generally necessary to relieve such cases.

“Local pain is often not relieved by the operation.

“Certain cases of neurasthenia which are associated with dysmenorrhœa, or with structural changes of the ovaries, are cured by the operation; nevertheless, no such case should be subjected to the operation without, beforehand, having the benefit of prolonged and patient treatment. It is unjustifiable to remove the ovaries and tubes in cases of neurasthenia, hysteria, &c., when these organs are healthy.

“Many prominent gynæcologists, including Goodell, Kelly, Price, and others, say that now they seldom remove the appendages for nervous diseases if the organs are sound and healthy.”

RICHELOT (*Annal. de Gynécologie*, 1891) reports the after-histories of one hundred and twenty cases, which he classifies as follows:

1. Three patients with salpingo-oöphoritis were entirely cured, and one had persistent pain in the stump;
2. Out of thirty cases of cystic ovaries, twenty were permanently cured; the other patients suffered for a long time, but were finally relieved;
3. Out of thirty cases of chronic salpingitis with adhesions two patients were not relieved for several months, and one menstruated regularly after both tubes and ovaries had been removed;
4. Fifteen patients with disease of the adnexa complicated with retroflexion and adhesion were permanently relieved;
5. Out of twelve cases of hæmato-salpinx and hæmatocele (ectopic gestation?) nine were cured;
6. Among twenty-seven cases of pyosalpinx with ovarian abscess one was cured, and several required a subsequent operation;
7. Thirteen operations for removal of the adnexa for the cure of fibroid tumours were successful—pain and

hæmorrhage being relieved while the growth diminished in size; 8. Normal adnexa were removed in three instances for the cure of hystero-epilepsy with good results, although in one instance melancholia with suicidal impulses persisted for a year and a half, the patient ultimately recovering. (*Amer. Jour. Med. Sciences*, May.)

The Relation of Varicocele to Neurasthenia.

WIEDERHOLD (*Deutsche med. Wochenschrift*, 1891, No. 37) believes that in many cases of hysteria with supposed ovarian symptoms the trouble is really due to dilatation of the veins forming the spermatic plexus, and that if any operation is performed, ligation of these veins is preferable to castration, providing that the ovary is not much diseased. (*Amer. Journ. Med. Sciences*, June.)

Large Extra-Peritoneal Polycystic Ovarian Tumour, completely Removed by Abdominal Section without Opening into the Peritoneal Cavity.

A unique case, both as regards its character and its operation. The tumour was a multilocular cystic growth, the cysts varying very greatly in size. There was no pedicle. One side of the tumour was composed of friable, closely-grained, spongy-like tissue, which gradually shaded off into firm tissue composing the wall of the main cyst. This was covered with a shining membrane. The minute structure corresponded very closely to that of a fibro-cellular ovarian tumour described by Doran in his work on "Tumours of Ovary, Fallopian Tube, and Broad Ligament," page 101.

These cysts are believed by Tait to develop from the unobliterated urachus, and never to be ovarian, but the author believes his case from its appearance to differ from those studied by Tait, and to more closely resemble one mentioned in the practice of Knowsley Thornton (*Lancet*, 1880).

The frequency of extra-peritoneal development and growth of papillomatous ovarian tumours is well recognised; they develop at the hilum of the ovary from the remains of

the Wolffian body, they usually remain completely interligamentous, possibly they are not the only kind that take their origin in this region, though it is highly improbable that glandular cystoma develops primarily at the hilum of the ovary.

The author quotes Doran that out of seven hundred abdominal sections, twenty-four were for removal of sessile cysts infiltrating the broad ligament. None contained glandular growth. (J. H. Ferguson, M.D., *Edin. Med. Journ.*, November, 1891.)

OBSTETRICS.

Dystocia due to a Cyst in the Liver of a Fœtus.

Dr. BAGOT read an account of an almost unique case in which a large simple cyst of the left lobe of the fœtal liver was the cause of great delay in labour. The woman had had one healthy child previously, and in this, her second labour, the head was born, but all the efforts that the students in attendance could make were insufficient to deliver the trunk. Dr. Bagot passed his hand into the uterus, and perforated the abdomen of the fœtus with Smellie's scissors. A yellow fluid poured out, and the child, a male, was then easily delivered. Only an imperfect autopsy was permitted, but save for the hepatic condition above mentioned the viscera appeared normal. The gall-bladder was absent. The mother was apparently syphilitic. (*Dublin Journal of Medical Science*, January, 1892.)

A Case of Complicated Labour.

Dr. J. F. JENKINS was called to attend a primipara, 21 years of age, who suffered from œdema of the face and limbs due to nephritis. The membranes had ruptured, but labour was not going on. The next morning, labour set in, and with it a convulsive seizure. The os was partly dilated, and a slightly fluctuating tumour was felt pre-

senting. Another convulsion supervened, and Dr. Jenkins applied forceps with some difficulty, and succeeded in delivering the breech with a large tumour attached to it; the child, a viable female, was soon thereafter born. There followed a profuse hæmorrhage, and the placenta had to be separated manually. The child lived only a few hours. The tumour, which was attached to the buttocks, was larger than the child's head—it measured at its base thirteen inches in circumference. It had no communication with the spinal canal, and it was composed of multilocular cysts containing fat and a gelatinous substance. (*The Journal of the American Medical Association, Chicago, January 23rd, 1892.*)

Spontaneous Evolution with a Full-time Fœtus.

G. RAINERI gives the account of a labour in which spontaneous evolution occurred, notwithstanding the fact that the fœtus, a male, was at the full term, weighed 3,400 grammes, and was 58 cms. in length. The mother was pluriparous, and was 34 years of age. She had had six previous confinements; the two first were natural, in the other four manual interference was necessary, and the children were born dead. She had in this, her seventh confinement, been attended by a midwife, the waters had escaped, the presentation had been recognised, and a large dose of ergot had been given. She was brought into the Maternity of Vercelli, when it was found that the fœtus was dead, and that the external measurements of the maternal pelvis were normal. Before practising embryotomy Raineri gave an enema of chloral hydrate, and took other means to relieve the uterine tonic spasm. Then the spasm retracted, strong uterine pains set in, the arm of the child was expelled, the right side appeared at the vulva, and the labour was completed in the mode known as classical spontaneous evolution. There was no laceration of the perineum, and the woman made a complete recovery. (*Annali di Ostetricia e Ginecologia, January, 1892.*)

Rupture of the Uterus Early in Labour.

CHERCHA (*Przegląd Lekarski*, No. 42, 1891, and *British Medical Journal*, April 23, 1892) reports a case of rupture of the uterus in a IV-para, pregnant at term. Patient was suddenly seized with a violent pain in the right hypogastrium. The os was but little dilated, membranes unruptured, head presenting. The pain in right side passed away; there were no labour pains. Four days later, patient developed rigors, fever, tympanites, restlessness and collapse. An attempt was made to perforate without anæsthesia, but the patient's abdomen was so distended that the foetal head could not be fixed. The os was then dilated with bags and version attempted, but on reaching the head Chercha perforated, drawing off nearly a pint of water. A leg was then seized, version performed and a macerated child delivered. The discharge of a quantity of brownish fluid followed the birth of the child. The placenta was found partly in the abdominal cavity, the uterine wall being ruptured on the right side. Much hæmorrhage followed. No vaginal injections were administered. Some intestines had prolapsed into the uterine cavity; these were replaced and the uterus packed with iodoform gauze. The patient suffered from perimetritis and high temperature, which continued for six weeks, and recovered with a small vesico-vaginal fistula.

The Effect of Trachelorrhaphy upon Parturition.

ANNA M. FULLERTON (*New York Journal of Gynecology and Obstetrics*, April, 1892) states that personal observation of many cases of labour, in which the cervix had been repaired, leads to the conviction that the secondary operation of trachelorrhaphy entails much suffering upon women who subsequently become pregnant. The removal of a considerable portion of cicatricial tissue, which is necessary in many cases of cervical laceration in order to gain good union and a neat-looking cervix, "cannot but result in the absence of

sufficient tissue to respond to the requirements of dilatation during delivery," thus greatly protracting the time of dilatation and increasing the suffering of the patient.

In support of these statements the histories of two cases, attended in the maternity wards of the Woman's Hospital, are given: The first case had the cervix repaired one year, and the second case four years, prior to the last accouchement. In the first case, two weeks elapsed, with almost continuous pain, before the cervix dilated to the size of a silver half-dollar, notwithstanding the use of sitz-baths, douches, dilators, chloral and opium. In the second case, nineteen days of suffering passed, under similar treatment, before the os would admit the index finger. In each case, the passage of the head tore the cervix in the line of union. The primary operation was performed in each case, silkworm-gut being used in one and catgut in the other. The flabby, lacerated parts were easily approximated and union was perfect, the patients being discharged within three weeks. The writer advocates the resort to primary trachelorrhaphy, and also believes that in cases of labour complicated with a repaired cervix, early bilateral incision of the cervix is to be preferred to such measures as were carried out in the cases reported, for the purpose of dilatation. (*Univ. Medical Magazine*, June.)

GENERAL, OPERATIVE, &c.

Preparation of Catgut for Ligatures.

† Prof. William Goodell prepares his catgut ligatures as follows: The unprepared gut comes in greasy coils of a dark-amber colour. To dissolve out the fat, these are placed in commercial ether for from twenty-four to forty-eight hours, according to the size of the gut; and, if the gut is of the larger sizes, the ether is changed once. The gut is now immersed for forty-eight hours in a 1-to-1,000 alcoholic solution of corrosive sublimate. It is then wound on glass spools by surgically-clean hands, and kept permanently for use in a

mixture of two parts of oil of juniper to one part of alcohol, which is occasionally changed. When needed for an operation, the requisite number of spools are transferred to a mixture of one part of glycerin, which has been sterilized by heat to nine parts of alcohol. This gives the gut greater smoothness and pliability. Thus prepared, it will last in the tissues of the body from a week to ten days.—*The Therapeutic Gazette*, January.

The Relation of Influenza to the Growth of Intra-pelvic Tumours.

LECLERC (Inaug. Diss.; *Centralblatt für Gynäkologie*, 1892, No. 6) has made the following interesting observations based upon forty-four cases of uterine and ovarian tumours: In consequence of the increased pelvic congestion during the attack there is a distinct acceleration of the growth of the tumour which continues after recovery; by reason of the general depression of the system attending it, the vital activity of the normal cells is diminished and proliferation of the cells of the neoplasm goes on more rapidly. This increase in the activity of morbid growths is most marked, also, in cases of tuberculosis of the genitals and peritoneum. (*Amer. Jour. Med. Sciences*, May.)

NOTES AND NEWS.

THE reports of laparotomies are more numerous than any other single surgical operation. In New York, one man alone last year reported 200 laparotomies. The number performed by the numerous other operators must have been large. Dr. F. B. Robinson, in the *Obstetrical Journal*, tells of a country doctor who reported 35 laparotomies in one year. A young doctor in a town of 3,000 inhabitants did 72 laparotomies in seventeen months. One operator in Detroit lately did three laparotomies in one day, while two a day is not an uncommon task for him. The many other operators make an aggregate number of these operations during the year large. The same is true of every other progressive city and village in the United States. The operation of to-day is laparotomy. Those operators are "left" who do not make a large showing. Doubtless this matter will settle itself correctly in time, but meanwhile the women have lost their ovaries. The same may be said of the introduction of every other new operation. The pendulum swings from one extreme to the other, finally striking a mean.—*The American Lancet*.

DR. ROBINSON (*American Journal of Obstetrics*, January, 1892) says:—"While in Toledo for eighteen months, I watched abdominal sections over a radius of fifty miles, and I noted ten cases who died on the table or immediately after operation. Of course a great many of these cases were desperate, and might have died any way, but in most of them the operators were inexperienced, some of them not having done more than one operation, and some of them none. I remember a young man who came to a prominent gynæcologist there and asked him how he would do a laparotomy. He asked him how he would drain a belly with a tube standing straight up. The doctor told him, and then, thinking that the young man, who was totally without experience, was going home to do a laparotomy, he said—'Doctor, don't do that operation; you do not understand how to do it.' But the young man went home and the next day did a laparo-

tomy on a woman, 26 years of age, who had some tubal disturbance, and she died in twenty-four hours."

ACCORDING to the *Medical Age* there are 123 medical colleges in the United States, of which 92 are regular, 9 eclectic, 14 homœopathic, 1 physio-medical, and 7 post-graduate.



THE BRITISH GYNÆCOLOGICAL JOURNAL.

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THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MAY 26, 1892.

HENRY A. REEVES, F.R.C.S., VICE-PRESIDENT, IN THE CHAIR.

PRESENT : 16 Fellows and 4 Visitors.

Mr. CHRISTOPHER MARTIN showed four specimens.

I. The first was a *vesical calculus* removed by Mr. Lawson Tait. The patient was a married woman, aged 30 years. She had had several children, the last being born three months before the operation. She came to the Hospital for Women, Birmingham, with the following symptoms :—Constant pain in the bladder, which was aggravated by any jolting movements, extreme dyspareunia, the passage of thick slimy offensive urine, almost complete incontinence of urine, which dribbled away night and day. There was no history of blood in the urine. Three months previously she had been confined, the labour being most difficult and forceps having to be used.

On examination the stone was felt through the anterior vaginal wall, and the diagnosis was confirmed by the passage of a sound into the bladder.

The patient was anæsthetised and placed in the lithotomy

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position. Mr. Tait then opened the bladder through the anterior vaginal wall, making an incision about $1\frac{1}{2}$ to 2 inches long, and removed the stone. The wound was sutured with silver wire and a self-retaining catheter introduced into the bladder. The sutures were removed on the eighth day, when the wound was found to have healed by first intention. The stone measured 2 inches in its longest and $1\frac{1}{4}$ inches in its shortest diameter. It was composed of phosphates, with a small uric acid nucleus. The interesting points of the case were (1) the rare occurrence of stone in the female bladder, (2) the absence of hæmaturia, (3) the marked incontinence of urine, (4) the difficulty in delivery it apparently caused.

II. The second specimen was a *double pyosalpinx*, removed from a patient who was married and the mother of several children, the last of whom was born three years ago. The chief symptoms were severe pain in the pelvis and back, painful micturition and defæcation, profuse and painful menstruation (the pain being of the typical premenstrual character), dyspareunia, and profuse leucorrhœa. There was a doubtful history of gonorrhœa, followed by repeated attacks of pelvic peritonitis. All her symptoms were steadily increasing in severity.

On examination there were felt two tender hard fixed masses, one at each side of the uterus, meeting behind it and fixing it.

At the operation both Fallopian tubes were found greatly enlarged, distended with fluid and very adherent. The abdominal ends were occluded. Both tubes were removed unruptured. The patient made a good recovery. After removal one of the distended tubes was laid open and was found to be distended with pus. The other had not yet been opened, but there could be no doubt that it also was full of pus.

The specimens were shown as very typical specimens of *pyosalpinx*. They showed the clubbed and greatly enlarged abdominal end, the thickening of the tubal wall and the coiling of the sausage-like tube around the ovary.

III. The third specimen was a large *multinodular myoma* removed by Mr. Lawson Tait from a patient of Drs. Stancomb and Thomas, of Southampton. The patient was married, aged 55 years, and the mother of several children.

The leading symptom was terrible hæmorrhage which was imperilling the patient's life. When Mr. Tait saw the patient she was perfectly blanched. The tumour which was removed by the operation of hysterectomy weighed thirteen and a-half pounds. The patient had made a very good recovery. The tumour was composed of numerous masses of myoma. On its anterior surface was a thin walled cyst containing about a pint of straw coloured fluid. The most interesting point in the specimen was the presence of a polypus which was four inches long, two and a-half wide, and one and a-half thick. It was attached by a short pedicle to the upper wall of the uterine cavity. This uterine cavity was embedded, so to speak, in such a dense mass of myoma that it would have been futile to have attempted to have removed the polypus *per vaginam*. The only course open was to do hysterectomy which was urgently demanded to save the patient from bleeding to death. This specimen confirmed what Mr. Lawson Tait had previously insisted on, *viz.*, that in cases of large multinodular myoma where there was violent hæmorrhage a small polypus was often found in the uterine cavity, and this was the source and cause of the hæmorrhage. The suggestion that had been made—that in every case before opening the abdomen for the purpose of doing hysterectomy or removing the appendages for myoma the cervix should be dilated and the uterus explored for a polypus—was absurd. In the majority of cases the myomatous masses so surrounded, the canal that to dilate the cervix was highly dangerous. In many cases it would be an impossible task and the very height of folly. He had had an experience which amply demonstrated the danger of such a proceeding. A patient had a myoma which was believed to be submucous if not polypoid. At any rate it was deemed advisable to dilate the cervix and explore the uterus. The

dilatation was effected with great difficulty. The uterus was explored and the myoma felt behind the uterus. It was then evident that it could only be treated by abdominal section. But the very process of dilatation immediately brought on an attack of acute peritonitis, and the patient nearly died. The lesson to be learned from the case was that it was by no means a safe thing to dilate the cervix in a myomatous uterus, and certainly ought not to be carried out as a routine proceeding.

IV. The fourth specimen was a *strangulated ovarian cystoma* removed from a patient of Dr. Smith, of Leamington. The patient was married, aged 37, the mother of three children, the last being born two months previously. The day before the operation the patient was in good health, and had no idea that she even had a tumour. Suddenly she was seized with violent spasmodic pain in the hypogastrium. Copious vomiting of bilious matter set in. A tumour was then discovered rising out of the pelvis. This hourly increased in size, and became tense and hard. Symptoms of internal hæmorrhage developed, and the patient rapidly became collapsed. Mr. Tait and Mr. Martin were telegraphed for. The diagnosis was made of an ovarian tumour which had rotated on its axis, and become strangulated. The abdomen was opened without delay, and at once the tumour, black with infiltrated blood, came into view. It was found that it had undergone rotation from left to right around its vertical axis, so that the pedicle was twisted like an umbilical cord. The tumour seemed to have made two and a-half entire revolutions. The chief cyst cavity was full of blood, and the entire tissue of the cyst wall was infiltrated with it. Had the patient not been operated on then she would certainly have died in a few hours; as it was she was now out of danger, although still very anæmic.

Dr. HEYWOOD SMITH said that not only Mr. Tait, but Dr. Bantock and himself had exhibited fibrous uteri having polypi growing from the fundus. Where the cervix was normal or nearly so it was advisable first of all to dilate it

so as if possible to reach the polypus, but when the cervix was involved in the fibroid growth, the risk, as they had just had shown them, was too great, and it would be better to proceed at once to operate.

Dr. R. T. SMITH remarked that if, as it appeared on examining the specimen, the polypus in the uterus was from four to six inches above the cervix, there were no means of removing it by dilatation at such a distance, and therefore had its presence been known it would have afforded no argument against the treatment of the case by hysterectomy.

He also asked Dr. Inglis Parsons if he had not found in his experience that electrolysis when one pole was inserted in the uterus frequently produced watery, and in some instances, intractable, discharges in patients who previously had no such discharge.

Ovariectomy during Gestation. By FANCOURT BARNES, M.D.,
Physician to the Chelsea Hospital for Women.

Mrs. M. P——, aged 31 years, married ten years, had five children, of whom the last was born three and a-half years ago. During fifteen months she noticed a lump in the right iliac fossa; since February of this year, the tumour has rapidly increased, and appears more prominent on the left side. She was sent under my care by my father, Dr. Robert Barnes, who had examined her in consultation with Dr. Jago; he was of opinion that pregnancy existed, but that the diagnosis of the general condition was obscure. When I examined her in the hospital I found that the breasts exhibited no signs whatever of pregnancy. The abdomen was very distended by a large irregular nodular mass, more prominent in the left iliac region than elsewhere, which gave the sensation of being a cancerous growth. The measurement round the waist at the umbilicus was forty-three inches. On vaginal examination the uterus was felt to be enlarged and pushed back against the sacrum. The cervix was pushed back, high up, and soft. As neither Dr. Travers, Dr. Inglis Parsons nor I

were able to make a definite diagnosis as to the nature of the tumour, I opened the abdomen on 12th May. I found a large multilocular cyst of the left ovary; it occupied the whole of the abdominal cavity, and there were adhesions of the intestines to almost the whole of the surface of the cyst wall. The intestines were in a state of acute congestion throughout. The cysts contained colloid material, embedded in innumerable ramifications of smaller cyst walls. These had to be broken down and most of the cavity of the cyst cleared out through an opening in the cyst wall, until the bulk of the tumour had been sufficiently reduced in size to admit of its being drawn through the abdominal wound; some of the cyst walls inside the mother cyst were breaking down; the pedicle was transfixed and the tumour removed; it was then seen that the pedicle sprang from the left side of the uterus, which was enlarged to about the size of a four months' pregnancy. The abdomen was then washed out with clean warm water, and the wound closed with silver sutures. The temperature of the patient had ranged between 100 and 101 until the day of the operation; two days after the operation it fell to 99, where it has remained to the present time. The stitches were removed ten days after the operation. The wound had healed by first intention. There has been no symptom whatever of the pregnancy having been interrupted.

Dr. Shaw Mackenzie examined the tumour for me and reports as follows:—"The tumour consists of a large multilocular cyst removed during pregnancy. In some places large hæmorrhages have occurred coincident, probably, with the previous clinical histories of fainting and collapse. The diagnosis in these cases is usually extremely difficult, the uterine sound being of course contra-indicated in any possibility of pregnancy."

Dr. ROUTH said that Dr. F. Barnes' case was very interesting, evidencing his excellency of diagnosis of co-existing pregnancy, while the signs of this condition were so incomplete. The tumour was easily recognised, but except

the cessation of the catamenia there appeared to be no conclusive signs of pregnancy. The breasts, it was distinctly stated, gave no indication. The uterus was felt to be high up, so ballottement could not be made out, and the tumour being in front of the uterus precluded bimanual examination for pregnancy. Now this was precisely the case where a bimanual vaginoscope might have cleared up the case. He did not know why, but there seemed to be some prejudice against using this instrument, whereas it was far more delicate in its use, and more sure than the ordinary stethoscope. In using this last you had to expose the abdomen. With the vaginoscope—the vaginal end of which was glass and could be applied under the clothes as a speculum, the aural portions being unusually long—no exposure was necessary if the clothes were only prevented from rubbing the instrument. If used in this case the uterus, however high up, could easily have been reached, and the placental souffle, if not also the foetal heart, could have been heard, and the diagnosis assured. He would bring the instrument some evening to show it to the Fellows.

Dr. MANSELL-MOULLIN congratulated Dr. Fancourt Barnes on the successful termination of his case. He said the safer course, when an operation was necessary on account of an abdominal tumour of doubtful nature, complicated by pregnancy, was to empty the uterus first. He mentioned several cases published in the Society's Transactions, which fully bore out this statement. The majority of women aborted within a few hours after the operation. To operate in such a case was to expose the patient most unjustifiably to unnecessary risk, on the highly problematical chance of saving the ovum.

Dr. HEYWOOD SMITH said that with regard to the diagnosis, he should have thought that with a uterus of about four or five months' pregnancy it would have been possible to have detected it on one side or other of the tumour. With regard to the differential diagnosis between an ovarian tumour and hydramnios, the irregular outline of the one and the

smooth contour of the other should be a guide; besides which, on being stimulated, the uterus would be felt to contract. He felt bound to disagree with what had fallen from Dr. Mansell-Moullin. It was not good practice to empty the uterus first in these cases, because the woman would have to run the risk of the puerperium, with the additional disadvantage of the induction of an abortion, and then afterwards have to undergo the operation of ovariectomy; whereas his experience was that in the majority of cases that were operated on during pregnancy, the pregnancy went on to full term. In all cases, therefore, of pregnancy complicated with ovarian tumour, whether large or small, it was best to operate, because if small they were likely to be pressed down into the pelvis in front of the head of the child—as in a case he had some time ago, where he had to empty the cyst before he could deliver the child—or when the tumour was large, the uterus and the tumour growing together, the proper development of the child might be hindered, or the cyst might be ruptured and give rise to fatal mischief.

Dr. INGLIS PARSONS showed a specimen of urethral calculus. It was fawn-coloured, pear-shaped, weighed sixty-eight grains, and appeared to consist of uric acid. The patient was a woman aged 40, who came to the out-patient department of the Chelsea Hospital for Women in 1888 complaining of irritation of the bladder. No stone could be found, and the urine was healthy. Under treatment with bromide of potash and hyoscyamus she improved and ceased to attend. It appeared to be merely a case of irritable bladder without definite cause. A year later the same patient came again, with the stone described lying loose just within the urethra. When the patient attempted to micturate, the urine carried it against the orifice and blocked the passage. A solution of cocaine was painted over the orifice of the urethra, a small incision was then made through the vaginal wall into the urethra and the stone was squeezed out. The patient went home the same afternoon and made a good recovery.

Dr. V. DICKINSON asked what connection there was between the first attack and the second. He was of opinion that the shape of the stone showed very clearly that it had been formed in the renal pelvis, and that the first attack was the result of irritation of the renal pelvis, no stone being sounded in the bladder. He considered that the term irritable bladder should be limited to cases where a distinct, though perhaps slight, catarrhal condition of that organ was found. Probably an estimation of the amount of phosphates in the outer layers of the calculus might afford some guide as to how long it had been in the bladder.

Dr. HEYWOOD SMITH opened a discussion on the treatment of chronic endo-cervicitis. Without entering into the question of the various causes of endo-cervicitis, he began by pointing out that it often followed upon chronic cervicitis associated with induration and granular erosion of the lips of the cervix. This condition was still often called "ulceration," but erroneously; whereas it was really a proliferation of the epithelial elements, and, in fact the surface stood up above the surrounding tissue and gave a velvety feeling to the touch. In many cases endo-cervicitis seemed to proceed upwards from this granular condition of the cervical lips, but in many the granular disease existed without endo-cervicitis, and also the latter condition without the former. In proceeding to treat endo-cervicitis it was not advisable to do so straight away without preparing the uterus, as otherwise more mischief might be set up in the cavity of the uterus. The cervix should first of all be freely punctured or leeches, and then treated with glycerine plugs and hot douches continued for about a week, after which the cervix could be dilated for the purpose of applying the remedy. Although sponge tents were very useful in their way, and no doubt helped to set up a healthy action in the endothelium, yet their use was not wholly without risk; he considered it better, therefore, to use rapid dilatation by means of graduated metal sounds; if these were used up to about No. 10 or 12 there would be sufficient dilatation to be able to apply a

Playfair's probe wrapped round with cotton wool and soaked in any fluid that might be desirable—of which perhaps strong carbolic acid or iodised phenol was the best. If a Playfair's probe was used it was inconvenient to keep it in the uterus a sufficiently long time to be of much use; he had, therefore, devised a small box-wood stem, having a string attached, round which cotton wool could be wrapped, and after dipping this in the iodised phenol it could be introduced into the cervix and left in for two days without any inconvenience or pain. Or a duck-bill speculum could be used, and he considered his modification was the best, as it allowed of plugging to be carried out more easily than with the ordinary form; the uterus could then be drawn down and a folded piece of lint soaked in the fluid passed up the canal with a pair of forceps, and the vagina guarded with a sufficiently large tampon. Other applications might be used, such as chromic acid, nitrate of silver, &c.

Dr. V. DICKINSON thought that all treatment was futile that did not ensure the medicament being left in the uterine canal a sufficient time for it to exercise its full effect. A plan he found most convenient was to pass in a pledget of wool soaked in iodised phenol, &c., wrapped round a tent introducer; it was thus easily left *in situ*. He had found iodol or resorcin, used dry and employed after the same method, also most useful, and it was free from the objection that the application would run down to the vagina or vulva, as might happen when it was fluid.

He thought that Dr. H. Smith's precaution of preliminary depletion and dilatation not necessary, being of opinion that cases of simple erosion, with a clear (normal) secretion, and an undilated cavity, needed no other local treatment than hot douches and glycerine tampons. It was in the cases with a patulous cavity that local treatment was needed, and mere swabbing out was useless; the application must be left in in such a way as to come thoroughly into contact with all parts of the patulous canal, and this was best effected by the method he had described.

Surg. Lieut.-Col. JOUBERT (Calcutta) remarked with reference to Dr. Inglis Parsons' statement that occasional doses of mercury were found to have very good results in the treatment of these cases of endo-cervicitis and endometritis, that a very excellent local application was the acid nitrate of mercury. It was recommended many years ago by the late Dr. Henry Bennet, and he himself had used it frequently in the treatment of erosions of the os and chronic inflammatory conditions of the uterine canal. Not only was the powerful corrosive action of great use in destroying unhealthy surfaces, but the mercury was absorbed locally in a remarkable manner. In one case a single application to the cervix was followed in two or three days by profuse salivation, the patient being probably peculiarly susceptible to the influence of mercury. In two other cases also he has seen slight salivation produced by two or three local applications of the acid nitrate of mercury. We had, therefore, in this drug practically a double-barrelled weapon for the treatment of these obstinate cases, one or two applications being followed up by the use of milder agents, like iodised phenol, &c.

Dr. MANSELL-MOULLIN said Dr. Heywood Smith placed too much importance on the local catarrh. He considered the backache always present in these cases was not due to the endo-cervicitis, but that both conditions were symptomatic of a general pelvic congestion and want of circulation. He admitted the treatment of these cases was most unsatisfactory, and it seemed to make little difference whether the patient was confined to bed or not. General treatment might effect a good deal, but he had almost abandoned the local application of caustics.

Dr. MAITLAND GLEDDEN (Melbourne) referred to the increase of the physiological secretion of the cervical glands which occurred in women who were anæmic, or out of health from any cause. In these cases constitutional remedies were of most use. When the discharge was purulent or mucopurulent, local treatment in addition became necessary. As regards the true pathology of erosion, it was first pointed out

by Ruge and Veit that this was a hyperplastic, and not, as formerly believed, an ulcerative, process, the columnar cells of the cervical canal invading the squamous epithelium of the vaginal portion of the cervix.

Dr. HEYWOOD SMITH, in reply, thanked the various speakers for their remarks, especially as to the propagation downwards of the granular inflammation being the more usual course of the disease, though he considered that the persistent condition of the disease at the os occasionally led to its propagation upwards. He quite agreed with the observation that had been made as to the usefulness of the acid nitrate of mercury in cases of granular disease—in fact it was almost a specific in such cases. In the short time at his disposal he had not had time to go into the subject with anything like the completeness that the importance of it demanded, nor to refer to curetting and many other means of treatment.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JUNE 9, 1892.

FANCOURT BARNES, M.D., VICE-PRESIDENT, IN THE CHAIR.

PRESENT: 29 Fellows and Visitors.

Drs. Engelmann and Flynn were proposed for election.

Dr. TRAVERS showed three dermoid tumours of the ovary recently removed from patients at the Chelsea Hospital for Women, sent up from Dr. Schacht's out-patient clinic. Two of the cases called for no special remarks; in the third case, the pedicle had become twisted between her attendances at the out-patient department. Her symptoms were urgent, and pointed fairly distinctly to the altered condition. She was operated on forthwith, the urgency of her symptoms ceased, and she did well.

The Uses of Anæsthetics in Gynæcology. By DUDLEY W. BUXTON, M.D., B.S., M.R.C.P., Administrator of Anæsthetics, and Teacher of their Use in University College Hospital, &c.

The opportunity which the initiation of this discussion affords me of presenting to those whose work lies mainly in the province of gynæcology, a statement of our experience of the uses of anæsthetics in this connection, is one of which I gladly avail myself. When it is remembered that not only the success of the operation, but the very life of the patient may be, and often is, jeopardised by the manner in which the anæsthetic is administered, I think no one of experience will attempt to belittle the importance of the subject we are here to-night to discuss. Indeed, it seems fairly reasonable to enquire why no attempt has up to the present been made to

collect, sift, and arrange the large amount of evidence which has accrued since Sir James Young Simpson, in 1847, first used chloroform in his obstetric practice. Since no such an attempt has been made, if we except the most laudable and valuable Report of the Royal Medico-Chirurgical Society of Great Britain, it is peculiarly appropriate that this Society should be the one to step forward and undertake so important and useful a task. It may be asked, How can the use of anæsthetics in gynæcology differ in any essential points from their use in other departments of surgery? The answer to this query will be found in the consideration of the peculiar requirements of gynæcology which are absent, or not so urgent in general surgery, save perhaps, in intestinal surgery. We will now proceed to discuss these requirements, and to learn, if possible, how they may be best satisfied.

The determination of the choice of the anæsthetic must in this line of practice be one of peculiar difficulty, and again the selection of the method by which the anæsthetic once chosen may be given must be carefully made. The operations of gynæcology vary greatly alike in character and severity; some needing the utmost care and experience in the administration of the anæsthetic; some on account of the extreme length of time during which insensibility is required; others on account of the posture which the exigencies of the operation render necessary, a posture which often interferes very much with the proper administration of the anæsthetic. Nor can we in many cases—especially in abdominal sections—foresee into what any given operation will eventually lead us, for often a case undertaken with a light heart under the belief that it was of a most simple nature, will turn out to be bristling with difficulty alike for the surgeon and the chloroformist. Abdominal sections as a rule give rise to a very considerable amount of shock, probably, at all events, in part due to the manipulation of the viscera, but no doubt in part occasioned by the contact of air with the abdominal cavity, since closing the wound results in a marked recovery. In such cases the effect of the anæsthetic must, by either adding

fresh shock or lessening that which exists, tell against or in favour of the patient. But this question of shock is a very complex one, for as it is greatly influenced by the amount of the bleeding as well as by the other circumstances, the choice of the anæsthetic must not only be made with regard to whether or no the anæsthetic produces or lessens shock, but must also have regard to whether or no the anæsthetic increases or diminishes hæmorrhage. These considerations affect the patient, but after all due regard has been paid to her, there yet remains to be considered the convenience of the operator. An operation, simple enough in itself, may become one of great danger and difficulty if the anæsthetic employed is not happily chosen and not successfully administered. We may then consider the claim of the more usual anæsthetics as regards

1. The patient.
2. The operation.
3. The surgeon.

Chloroform has justly been held in the highest repute as an anæsthetic in obstetric and gynæcological surgery ever since its introduction into use by Sir J. Y. Simpson. For many years it reigned supreme, and even now there are institutions where the intrusion of no other anæsthetic is permitted. Undoubtedly it has everything in its favour except its depressant action. Its extreme portability, the fact that it can be successfully given without any more complicated apparatus than can be made with a fold of lint or a towel, are considered greatly in its favour, although in hospitals and nursing homes this argument loses some of its force. Chloroform possesses the great merit of ensuring a placid anæsthesia and lessens immediate hæmorrhage as it lowers the arterial tension and quiets the cardiac movements. From its action upon the medullary centres it induces a slowing of the respiration with diminished amplitude of the respiratory movements, and so, from the point of view of the operator, chloroform is *par excellence* the anæsthetic for operations in which quiet breathing is essential, *e.g.*, abdominal sections.

It is claimed also for chloroform that after-sickness is less to be anticipated than when ether is employed, again a very important matter in abdominal surgery. I cannot, however, think that this claim is at the present time one the validity of which can be accepted without still further proof. Undoubtedly in days gone by, when ether was used in enormous quantities, poured upon a towel or drenched into a cone and the patient was compelled to inhale a vast amount of it, it certainly produced the most violent and uncontrollable sickness, but this untoward result was due rather to the faulty methods then in vogue in the administration of the ether than to the anæsthetic itself. The after-effects of chloroform and of ether are determined by the *quantity* of the anæsthetic given, and as we now know how to give ether in such a way as not to require proportionately more, weight for weight, than of chloroform, there is no reason to expect more after-sickness from the one than from the other anæsthetic. In practice also I find I do not get more from one than from the other. Again, the important plea urged for chloroform as against ether in severe operations, such, for example, as in hysterectomies, that it lessens hæmorrhage needs some scrutiny. The immediate effect of chloroform is to stimulate to a slight extent the circulation, but this is rapidly followed by a re-action which leaves the heart beating more slowly and less vigorously than normally. This depression increases if the inhalation be a very prolonged one, and may lead to very marked circulatory enfeeblement, but as soon as the operation is completed and the patient is put back into bed the depression passes off and a very considerable acceleration of the pulse occurs together with an increased force of the heart's action. Of course, the effect of ether is one of continuous stimulation alike of respiration and the circulation, which, however, wears off as the patient becomes completely under the ether, and little or no after re-action follows after the completion of the operation other than what is attributable to the usual process of events in recovery from "surgical shock." Now these physiological facts translated into the

sphere of surgery mean that although the immediate hæmorrhage under chloroform is less than that under ether, yet as soon as the patient passes from under the eye of the surgeon, the hæmorrhage or oozing commences. Thus, bleeding under ether is seen at the time of the operation and dealt with, that under chloroform may be masked by the enfeeblement of the circulation and so escape observation until the condition of the patient subsequently calls attention to the presence of bleeding. Thus should we—

“rather bear those ills we have,
Than fly to others that we know not of.”

But the pleasantness of the smell of chloroform, the ease of its employment, the perfect and quiet anæsthesia it induces would, were there no drawback to its use, place that substance in the first place for abdominal operations. However, there is a grave objection to chloroform. Whether we say it kills through the heart, through the lungs, or through the nervous system, it certainly does kill persons out of hand, and in a way which at present baffles all our attempts to obviate. I used chloroform either pure or in the form of the so-called bichloride of methylene for many years at all abdominal sections at The Hospital for Women, Soho Square, but although we had no death under the anæsthetic when I was administering, yet there were several cases of grave peril, arising, I believe, from the depressing effect of the chloroform upon the heart. Take it at its best and at its worst, chloroform possesses many undeniable advantages alike for the patient, the operation, and the surgeon, but it also has many grave disadvantages, and it becomes our duty to examine each case upon its own merits, and determine whether the advantages outweigh the dangers. One little point we must, however, consider before passing on to speak of ether. It is this: when the Committee of the Royal Medico-Chirurgical Society instituted a comparison between chloroform, ether and the A.C.E. mixture, they advised that the last named should be employed, because while anæsthesia could be rapidly induced by chloroform it was accompanied by danger, and

because although ether anæsthesia was safe it took *so long to obtain*. Now this is exactly reversed nowadays, with a most important result, that one of the main contentions against ether has thereby been removed. To-day we regard slow chloroformisation—say from three to eight minutes—as being the only safe way of giving chloroform, while we regard any period of time beyond one and a half or two minutes as an unnecessary and undesirable prolongation of the period of etherisation. The practical bearing of this upon our subject is that when we desire a rapid anæsthesia without struggling, for such patients, for example, as those with feeble hearts, rigid arteries, fixed thoracic walls, large abdominal tumours pressing up and encroaching upon the thorax, we should select ether given by the plan I shall indicate in a moment, rather than chloroform, which may involve unconscious struggling, prejudicial to the patient's general or local condition.

In considering the case for ether I will bring forward the grave indictments which have commonly been advanced against it, and enquire how far these are objections to ether itself or are merely incidental to a faulty method of administration. It is said to cause struggling which may produce serious after-effects, pulmonary troubles consequent upon the cooling occasioned by the evaporation of the ether from the pulmonary mucous membrane. Chloroform, we are told, kills at the time of the operation if it kills at all, whereas ether kills as an after result from pulmonary complication, or from renal troubles consequent upon the irritant action of the ether on the delicate epithelium lining the tubules. Again nausea and vomiting are alleged to follow ether more than chloroform. A further charge against ether is its assumed tendency to cause rupture of brittle arteries and so determine cerebral apoplexy. Now when we come to look into these charges we are compelled to say they are not by any means proven. When ether is properly given by Clover's method, with or without the preliminary use of nitrous oxide gas, no struggling occurs in ninety-nine cases out of a hundred. Nor need the amount of cooling of the lungs, nor the irritation

of the kidneys be severe if ether is properly administered, a *minimum* quantity being given. How often nephritis follows etherisation I am unable to say; there have been a good many cases reported from America where ether is given from a cone and very large quantities are employed, but in my own practice I have never met with a case either in private or in hospital, and am impelled to think that no such untoward complication need arise if the ether is given sufficiently discreetly. Ether bronchitis is again more often heard of than seen, nor is it easy in cases when large areas of the body are exposed, to eliminate the action of cold. Certainly in cases of removal of the breast for carcinoma when the pectoral is either exposed or in part removed, and when wet towels or a disinfecting carbolic spray are in use it is impossible to decide whether the ether or the surgical proceedings are the more to blame for the onset of the bronchitis. The increased arterial pressure initiated by the ether may possibly be harmful when a patient has very degenerated arteries, although I have not myself met with any case of this kind in which any evil consequence followed the use of it. Here again the question of method is a most important one, for when nitrous oxide gas is given first no struggling occurs, and thus the gravest danger of arterial rupture is removed. In summing up then, I think we are bound to credit ether with certain merits, and of its drawbacks to say that most of them have been in part exaggerated and in part the result not of the ether as such but of the faulty administration.

Let us now consider more in detail the drawbacks so commonly attributed to ether.¹

The mechanical difficulties of the operation are, in the case of abdominal sections, said to be greatly increased by

¹ It is a point which should not be lost sight of, that very many of those who have spoken most strongly against ether have been those who seldom or never employ it and who have not acquired the requisite skill for manipulating it. That the successful use of ether does presuppose a thorough knowledge of it, and a considerable skill in its administration is, I think, indisputable.

the rapid breathing engendered by ether. In granting the validity of this statement I am bound to confess I have but seldom known serious inconvenience to arise from this cause. I used always to employ chloroform, methylene, or the A.C.E. mixture for these cases, but of late years I have substituted ether unless specially requested to give another anæsthetic, and I have seldom had occasion to regret my decision. Still in some cases this tumultuous breathing does come on and does inconvenience the operator. Catarrhal affections of the kidneys and bronchi are reputed as common sequelæ of ether administration, but I am convinced such cases are very rare. I have but seldom been called in to see such cases, although I have, as far as possible, followed up both my private and hospital cases. Diligent enquiries among colleagues have led to the same conclusion, that such cases are rare. Of the published cases I think many are explicable when it is recognised that to give ether for anæsthesia only two or three ounces are required for an ordinary operation, whereas when ether is given by a cone, often half a pound of ether is used, and the irritation and cooling produced by so tremendous a dose accounts for the sequelæ.

Again, the initial struggling, the straining and misery of ether as sometimes given, are great evils, but happily when we discard the method and employ nitrous oxide in an initial anæsthesia, following up its use by ether, we do away with all these troubles.

Finally, it is alleged chloroform when it kills, kills at once, ether any time within a week or two. I am convinced there is truth in this statement, but the after-effects attributed to the ether are preventable. Here, again, we are taxing the use rather than recognising the abuse. The sequelæ of ether can be kept within bounds of safety if men will only take the pains to learn how to use it.

Time does not permit me to carry my remarks farther. There are many practical issues I should gladly have brought before you to-night had I had time, I must, however, content myself by asking you to contribute your experience of the

uses of chloroform, ether and other anæsthetics in gynæcology, and your experience of the methods employed in their exhibition. I may instance as showing an important bearing on the result of an operation of using one or another method, the plan commonly adopted and taught by some experienced anæsthetists that when an abdominal section has to be performed, anæsthesia is practically only required during the skin incisions. This method would advocate that the anæsthetic should be given continuously until the abdominal parietes were thoroughly divided and not again pushed until the skin stitches are to be placed. Against such a plan I venture to say that from my experience of the lower animals and of abdominal sections in men and women, that a very grave degree of shock always attends manipulations of the peritoneum and viscera, and in view of this I should personally contend that a profound anæsthesia should be maintained throughout the entire operation. This question is one of sufficient importance to warrant me in eliciting your opinion upon it.

In conclusion, I would say that I am convinced we are now-a-days in no way paying too much attention to anæsthetics. Were we able to demonstrate that fact I am convinced we should find that the anæsthetic, the method of using it, the knowledge and skill of the anæsthetist, often make all the difference in the result of an operation. When that skill, that judgment begotten only of anxious years of experience are working in harmony with the finished surgery of the expert, the patient pulls through many a desperate surgical strait, but divorce these masters in their respective crafts, let the anæsthetic be given by rule of thumb by the young house surgeon, still meteoric with the inflation of his pass examination upon him, and deaths result, inexplicable alike to the operator and the friends of the patient, but simple in their explanation to the silent observer who has watched the careless chloroformist, or the inexperienced etherist !

Gentlemen, I commend this important theme to your further discussion.

Dr. FREDERIC HEWITT said that he was quite of Dr. Buxton's opinion that no hard-and-fast rules could be laid down either for the selection or for the administration of anæsthetics in gynæcological practice. The first consideration should be the safety of the patient. He referred to the recently published statistics of Dr. Julliard, of Geneva, from which it appeared that deaths under chloroform are about five times as frequent as deaths under ether. Dr. Julliard's figures were obtained from over 839,000 recorded administrations in many parts of the world. The great superiority of ether in point of safety should not therefore be lost sight of. Whilst admitting that cases occasionally occur in which chloroform, or a mixture containing chloroform, should be preferred to ether, he (Dr. Hewitt) believed that ether, if properly and carefully given, could be made to produce a form of anæsthesia which, so far as muscular relaxation and tranquil breathing were concerned, would differ but little from that obtainable by chloroform; whilst the circulatory phenomena of etherisation would be of a more satisfactory type than those met with under chloroform. Much depended upon the kind of ether employed and the apparatus used. Although there were many who held that the "pure methylated ether," or "washed ether" was preferable to other preparations, he strongly advocated an opposite view. He had often had occasion to use the two kinds of ether for the same patient, and had found less mucus and saliva to be secreted, a quieter form of respiration to result, and after-sickness to be less frequent with the ether prepared by Robbins and Co., viz., that made from pure ethylic alcohol, than with the methylated preparations. A few words might be said as to the choice of an inhaler. He used for many years Clover's portable regulating apparatus. But although this inhaler was a most ingenious one, and better than any other for giving ether if no other anæsthetic (such as nitrous oxide or the A.C.E. mixture) were used to commence with, it was not so satisfactory as Ormsby's for maintaining anæsthesia. He thought Mr. Braine's plan a good one, of com-

mencing with nitrous oxide and then going on with ether from an Ormsby's apparatus. If one anæsthetic and one inhaler were to be used, Clover's apparatus had no equal. With Ormsby's inhaler, when once anæsthesia was established, the respiration was less hampered, the colour of the features less dusky, and rigidity not so liable to arise as with Clover's apparatus. The explanation of this interesting fact probably was that in Clover's inhaler the channels were considerably narrower than in Ormsby's, and that the current through it was made to pass at right angles to its general course. Moreover it was probable that the bag of the Clover's inhaler retained expiratory products for a longer period than the bag of the other inhaler, seeing that in Ormsby's apparatus the chance of diffusion with the outer air was greater than in Clover's. These were small points; but they were of special significance in gynæcological practice, because in such practice quiet and unembarrassed respiration was more or less essential to success in operating. Dr. Buxton had criticised the view that had lately been expressed as to the advisability of discontinuing to a greater or less extent the administration of the anæsthetic in abdominal operations, after skin incisions had been made. The level of anæsthesia at which these patients should be kept was a matter of great importance, and one which had yet to be thoroughly worked out. One operator recommended a very light, another a moderately deep, and a third a very profound anæsthesia, in abdominal surgery. He (Dr. Hewitt) believed it was best, as a general rule, to keep up profound narcosis, although, of course, there were many exceptional cases in which it was hazardous to proceed as far as was usually advisable. With ether this deep and satisfactory anæsthesia could almost invariably be secured without difficulty; but this was not so with chloroform or its mixtures. The weaker the patient the greater would be the tolerance of a light form of anæsthesia, and the less the risk attendant upon such an anæsthesia. Vigorous subjects required very vigorous treatment and deep narcosis throughout. Inconvenient reflex phenomena, such as crowing breathing with

its attendant asphyxial symptoms, were far more common in strongly built and healthy persons than in cachectic and anæmic patients. We had yet to find an explanation of the fact that a large number of abdominal operations had been performed without disaster under the comparatively light anæsthesia produced by the so-called "bichloride of methylene," which is, in reality, chloroform mixed with methylic alcohol.

He agreed with Dr. Buxton that nitrous oxide gas should, as a general rule, be given before ether. But there were some cases in which it was better to use a small quantity of the A.C.E. mixture before ether. He specially referred to stout middle-aged or elderly women. These patients would be found to pass far more satisfactorily into quiet and deep anæsthesia by the plan he suggested than if nitrous oxide were used.

Dr. SCHACHT stated that at the Chelsea Hospital for Women during the last five years there had been considerably over 200 abdominal sections of all degrees of severity—that there had not been a single death from the anæsthetic—that there had been complaints about chest complications in only two or three cases—that these had recovered and that it was a matter of opinion as to whether the anæsthetic was to blame even for these. Such a record could not be beaten and he believed could not be equalled by any similar hospital where chloroform was always used. The so-called objections to ether could be minimised by careful administration and the addition of nitrous oxide gas. He felt very strongly that when alarming symptoms arose, as they must occasionally with both anæsthetics, there was much greater chance of recovery with ether than chloroform. He considered that when all the specialists who had spoken proved the one drug safer than the other, the large body of medical men who had to give anæsthetics occasionally would certainly consider the safety of their patients by adopting ether as their routine anæsthetic rather than chloroform.

Dr. BANTOCK congratulated the Society on having the subject brought before them by so able an exponent, and complimented Dr. Dudley Buxton on the impartial manner in

which he had dealt with it. Having had the good fortune to make his acquaintance with chloroform under the eye of the late Sir James Y. Simpson, while in charge of the gynæcological ward of the Royal Infirmary, Edinburgh, he had to confess to a distinct preference for chloroform above other anæsthetics. Yet he had always endeavoured to keep an open mind, and still kept up his interest in the subject. He could not understand the reason for the strong feeling—he might fairly say prejudice—which had existed for some years in this city against chloroform. It was not, in his opinion, justified by facts.

Dr. Buxton had very fairly, from his point of view, stated the advantages and disadvantages of chloroform and ether, and he (Dr. Bantock) was quite prepared to hear him express a decided preference for ether, in which he was unable to agree with him. One speaker had suggested that chloroform was not so well borne by the inhabitants of the southern part of this country as in the more northerly. But this explanation was hardly valid in face of the fact that in the southern part of the North American Union chloroform was exclusively used. In the Northern States, on the contrary, the same prejudice existed against chloroform as in this city, but to a greater degree. It was well known that anyone meeting with an unfortunate result from the administration of chloroform ran great risk of being indicted for a criminal offence. Yet several gentlemen, after witnessing the effects of chloroform as given at the Samaritan Free Hospital, went back carrying Junker's inhaler with them for future use. He had to confess that he had had comparatively little experience of ether as an anæsthetic, but what he had seen had impressed him very much. Only that afternoon he had seen an abdominal section done under the influence of ether, and he could not help contrasting the state of the patient with what she would have presented under chloroform. The livid face and mucous membranes generally, the laboured respiration, the stertorous breathing and copious perspiration, contrasted very unfavourably with the placid features and easy respiration that he was accustomed to with chloroform.

Dr. Buxton had spoken of chloroform as a cardiac depressant. He (Dr. Bantock) would like to hear the evidence on which this statement is based. It was contrary to all his observation and experience. He had long taken an interest in this question, and had carefully read the report of every *post-mortem* examination he had seen, and he had invariably found that the left side of the heart was firmly contracted. While in charge of the Maternity Hospital in Edinburgh, his attention was drawn to this aspect of the question. At that time it was the practice to give chloroform to every woman in labour, and the effects of the anæsthetic on the respiration, the pulse and the labour pains were carefully noted. In one case it was not till the next day that he became aware that the patient was the subject of valvular disease, with excessive irregularity of the heart. During the administration of the chloroform the pulse was perfectly regular and normal. His first case of ovariectomy furnished a striking illustration of the same effect, and he called the special attention of the anæsthetist to the subject before the chloroform was administered. He had since then frequently observed the same effect, and, moreover, had repeatedly called attention to the fact that a small, weak and rapid pulse before operation had become full and slow—in fact, normal—under the chloroform.

With regard to the so-called bichloride of methylene it had been already stated that it was only an impure chloroform. This had been demonstrated beyond all doubt. What reputation bichloride of methylene had, it owed to the advocacy of Sir Spencer Wells, with whom it was a sort of "pet lamb." It was, however, a striking commentary on his advocacy that within a very short time of his retiring from the active work of the Samaritan Free Hospital chloroform became the exclusive anæsthetic.

Dr. BUXTON having briefly replied, the Society adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, OCTOBER 13, 1892.

HEYWOOD SMITH, M.D., VICE-PRESIDENT, IN THE CHAIR.

PRESENT : 20 Fellows and Visitors.

Drs. Engelmann and Flynn were elected Fellows of the Society.

Drs. Beckwith and Cheney were proposed for election.

Mr. BOWREMAN JESSETT read the notes of the following case :—

Mary Robertson, aged 47, widow, admitted October 5th, 1891. Suffering from a tumour of the right breast. Family history : *nil*. Children : two, both nursed. No abscesses of breast. Duration : three years.

History.—Patient first came to hospital about two and a half years before admission with a tumour in the right breast about the size of an egg, she then refused to undergo an operation. Since that time the tumour grew, slowly at first, but for six months before admission it increased very rapidly. Patient on admission complained of the great weight of the tumour, which had grown to an enormous size. No glandular enlargement could be felt in the axilla.

Present State.—There is an enormous tumour of the right breast, uniformly hard. Skin tightly stretched over it and dilated veins run over the whole breast. Freely moveable ; no ulceration ; measures sixteen inches from highest to lowest point, and the distance round base of tumour is thirty inches. Nipple has been drawn in since commencement.

Operation.—Breast amputated. Patient bore the operation very well.

Tumour removed weighed 10½ lbs. Section showed it to be solid and firm, divided somewhat into areas. Beneath

nipple there was a space containing yellow pulpy material (probably degeneration of growth).

Microscopically it was found to be a sarcoma.

The wound healed up exceedingly well, and patient left the hospital October 26th. Up to the present time there is no recurrence of the growth.

Dr. ROUTH wished to ask Mr. Jessett whether the condition of the uterine organs had been examined in his case. He, Dr. Routh, believed that the relations of the uterus as causative of breast disease were more powerful than generally supposed. He had sent to the International Congress at Brussels a brief *résumé* of three cases illustrating this effect. In the first there was immense hypertrophy of the parenchyma of both mammae from uterine irritation; the second hypertrophy of the cervix, which projected six inches beyond the vulva, and gave one at first an idea that it was a male organ, in whom both mammae were as big as a man's head, but large from the size of the lacteal tubes, which were tortuous and hard, and not involving the parenchyma. However, amputation of the prolonged cervix immediately brought about absorption of the mammae to their normal size. She died five years after of phthisis. The third was a case of well-marked cancer of the breast which he amputated. But although the greater part of the wound healed, for weeks small cancerous points kept constantly cropping up, although he had constantly destroyed them with bromine. There were no external evidences of uterine disease, but as the other breast became painful, Dr. Routh insisted on a vaginal examination. He then found the uterus intensely ulcerated inside the cavity and outside on the cervix. He at once treated this organ, and cured the ulceration. No further cancerous points made their appearance, and although it was about six years since the operation, she remains perfectly well. He considered, therefore, that in all cases of mammary disease the uterine organs should be examined and treated, if found diseased.

Dr. HEYWOOD SMITH said with regard to Dr. Routh's remarks as to the theory that irritation or hypertrophy of the

cervix uteri led to disease of the mammæ, he considered that Baker Brown was right in his deductions, and that many cases of enlarged breast could be traced to irritation of the vulva or cervix uteri, and this was not to be wondered at if we considered the intimate sexual connection that existed between the mammæ and the reproductive organs.

Dr. HEYWOOD SMITH exhibited the uterine appendages that he had removed from a "kept" woman, aged 28, on July 7th. He first saw her in January, 1891, when she came to consult him about some lumps in her breast which had existed for some time. He sent her to Mr. J. Hutchinson for an opinion, and he thought the swellings were due to lobular induration. At the same time Dr. Heywood Smith found the left ovary enlarged and tender; the cervix uteri also was congested and granular. On June 12th the patient was taken ill with a rigor; on the 14th he saw her, when she was complaining of pain through the left hip. On the 15th, an examination was made and both ovaries were found enlarged, hard and tender; the uterus was partly fixed. On June 20th, she was admitted into Warrington Lodge, the mass in the left side being still the larger. On July 4th there was an increase of pain, temperature 103.6, pulse 128. On the 7th he operated. Both ovaries were found bound down and matted together; there were adhesions to the bowels both on the right and left sides, as well as to the posterior wall of the uterus. On the left there was an abscess, which ruptured during the separation of the adhesions, giving exit to some very foetid pus. The tubes were greatly enlarged and curved on themselves, and their distal ends closed. On the left the oviduct was dilated with fluid, but its walls were not much thickened; on the right side, however, the oviduct was not only enlarged but considerably thickened, and lined with a pyogenic membrane: where the bowel was adherent the tissue was hard and friable, especially near the mesentery. On the right there was no abscess, but a thin-walled cyst the size of a walnut was shelled out; it contained blood-clots. On the right, the adhesions were also hard and friable. One small

artery deep down in the pelvis, owing to the hardness of the tissue in which it was situate, could not be caught up ; it was therefore left, and the pelvis was packed with two medium-sized sponges partly wrung out with tincture of matco, and the stitches, silkworm gut, inserted ; the sponges were then removed, a glass drainage tube put in, the second stitch from the bottom of the wound being left loose and shotted. The wound was dressed with iodoform gauze and antiseptic pads a thin rubber sheet being slipped over the head of the drainage tube. The operation lasted one hour and a quarter. The tube was removed on the third day, and the loose stitch tied. The right ovary was not entirely removed. Menstruation came on and lasted from August 6th to 11th. Dr. Smith had good reason to believe that the patient was infected with gonorrhœa seven or eight years ago.

Dr. MACNAUGHTON JONES asked Dr. Heywood Smith what *direct* evidence there was of the occurrence of gonorrhœal inflammation having been either the immediate or remote cause of the condition of the appendages exhibited by him. The value of any such specimens as bearing on the question of cause and effect, as between gonorrhœal infection and pyosalpinx or other affections of the adnexa, depended on such evidence. He was one of those who believed that the importance of gonorrhœa as a factor in producing chronic endometritis and salpingeal mischief was rather under than over stated or realised. The consequence was that women were frequently permitted to drift out of gonorrhœal vaginitis into serious chronic pelvic mischief. The thorough cure of the specific vaginitis was not secured. Reckless syringing was often practised. He referred also to the danger arising from gleet in men and latent infective discharge in women. He had seen several cases in which so called gleet in men had brought about serious uterine and salpingeal mischief.

Dr. ROUTH thought that the infiltration of tubes from vaginal inflammation spreading upwards, was by no means restricted to gonorrhœa. Simple gleet and vaginitis, the first from the male, the second from the female, sufficed to induce

it in certain conditions. He had distinctly traced salpingitis to gleet in several instances, and no wonder, since he considered that the discharge from a woman, not vaginitis, but from a catamenial discharge, or the discharge from an ulcer, were sufficient to induce gonorrhœa in the male. Now, apart from the presence of gonococci, according to Apostoli (as he had frequently verified at his clinics), if the discharge in the female was gonorrhœa, you always found urethritis, and a swelling of the tubes was invariably present; salpingitis, not necessarily pyosalpingitis, would also be relieved or cured by the ordinary measures employed. Lastly, in relation to the nodules in the breast in this case, he wished to know if, after the removal of the appendages, these had disappeared. Certainly in a case like that mentioned by Dr. H. Smith, removal of the appendages was the only proper treatment.

Dr. INGLIS PARSONS asked, what evidence there was of gonorrhœa in this case. In his experience during seven years at the Chelsea Hospital for Women, it was quite the exception for tubal or ovarian disease to follow an attack of gonorrhœa. A great many cases were loosely ascribed to this cause without sufficient evidence. They must remember that even in the male, where the disease was more difficult to get at for treatment and where gravity helped the discharge to extend to other organs, it was uncommon to find abscess of the prostate and inflammation of the bladder. It was still less likely to occur in women where the discharge naturally drained away from the uterus and where the facilities for treatment and arrest of the disease were much easier. The appearance of the tubes in this case was certainly against the supposition of previous gonorrhœa. One was considerably hypertrophic and the other dilated; the two conditions either of which might occur if obstruction took place at the opening into the uterus. The term—latent gonorrhœa—appeared to him to be unscientific. It was agreed that the disease was local and it was either present or absent. He would like to know how a latent gonorrhœa could be defined. With regard to the gleet that followed in the male subject, it might be

infective, but if proper treatment had been carried out the discharge consisted only of mucus, and was the result of a debilitated condition of the mucous membrane of the urethra. He had known two such cases where a gleet followed acute gonorrhœa. No bad effects ensued after marriage and in both instances healthy children were born within a year. Husbands sometimes tried to deceive their medical attendants and ascribed to a gleet acquired before marriage the disastrous effects produced by a new and recent gonorrhœal infection, which they were ashamed to acknowledge.

In reply, Dr. HEYWOOD SMITH said, he quite endorsed what Dr. Macnaughton Jones had said with regard to gonorrhœa being a frequent cause of disease of the uterine appendages, and he might suggest whether the hip-pain that his patient suffered from might not have been of the nature of gonorrhœal rheumatism. In answer to Dr. Routh's question as to the effect of the operation on the nodules in the breast, he could say that, having recently seen the patient, they had almost entirely disappeared. It was doubtless true that gleet in the male could set up vaginitis in the female, but it was open to question whether, in the absence of the gonorrhœal bacillus, this could be termed true gonorrhœa. With regard to what Dr. Inglis Parsons had said as to the gonorrhœal discharge not easily rising into the uterus, he would call attention to the fact that a woman was not always standing, and that in many other positions, manifestly when she was lying on her side or face, such discharge could easily find its way upwards; besides, the imbibing action of the lips of the uterus would aid such passage, as was also seen in the case of the semen. He considered that in these cases where the disease was advanced, and where consequently the patient seemed doomed to life-long misery, it was quite justifiable to operate.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, OCTOBER 27, 1892.

JAMES MURPHY, M.D., VICE-PRESIDENT, IN THE CHAIR.

PRESENT: 15 Fellows and Visitors.

Drs. Beckwith and Cheney were elected Fellows of the Society.

What makes for Success in Abdominal Surgery?

By GEORGE A. HAWKINS-AMBLER, F.R.C.S.E.

THIS is a question that is asked very soon by every one who tries to familiarise himself with the work and methods of the greater abdominal surgeons: whose practice is often as different as their results are uniformly good. In discussing this question I am doing so from the humble standpoint of one whose personal experience is as yet small, but who has done and seen sufficient surgery to enable him to form a judgment which he is here merely presenting for correction.

And by success I do not mean the success of isolated surgical triumphs, which may really mean that the patient possesses a charmed life, and ourselves less skill than luck; but that success of prolonged experience, of a multitude of cases—which also include those delightfully simple and easy cases that lure the tyro and yet succumb to the expert. Not occasional success, but uniform, steady, every-day success, which enables one to count on a certain all-round mortality with an assurance as complete as pertains to averages anywhere. There is something very fascinating about abdominal surgery. Like literature, it is a vocation that men think they can enter without serving an apprenticeship. Just as shy men, when they do act and speak, do so with a brutal frankness;

so the shy surgeon, afraid of the aneurysm, the mutilation, the visible complications of ordinary surgery, rushes for abdominal surgery, proclaims his fitness to do a Porro on occasion, and repudiating all reverence for that peritoneal cavity which many general surgeons of consideration still open with awe, is satisfied with nothing less than abdominal surgery. Once inside the peritoneum something must be done to excuse the operation, which succeeds or does not succeed. I believe many disasters are the result of the too careless speech of men whose experienced hands can do safely what another could not attempt with safety to his patients. Safe as they find it, it is nevertheless a serious undertaking to enter the peritoneal cavity; why it is safe, and why with some men it is brilliantly safe, I desire to enquire.

Is it antiseptics? Well, I don't think their most enthusiastic advocate would venture to claim that antiseptics are *necessary* in abdominal surgery; and a comparison of the results of Mr. Lawson Tait, and others who scorn the use of antiseptics, with the best results of antiseptic surgeons, would not lead us to employ them. It is a fantasy that is passing away, this craze about antiseptics, though I actually know an abdominal surgeon of repute who tells me he continues to use his spray "on the off chance." Another surgeon tells me, too, that he uses rigid antiseptics, but cannot understand why he invariably has a rise of temperature after his abdominal sections; and I am too polite to draw attention to his finger nails. I believe we can do as well, or better, without antiseptics; but we can't do without soap and water, and so long as this is freely used antiseptics are, in moderation, perhaps a harmless amusement.

The propriety of cleanliness, as a counsel of perfection, will not be questioned by any operator. But whether it be practically carried out by many surgeons may be doubted. Supreme reverence, or as excessive contempt, appear to be the only feelings entertained by abdominal surgeons for the peritoneum. Some are extremely clean operators, others will make a great outcry about antiseptics, but have a

seemingly incompatible carelessness about what is admitted to the peritoneal cavity. To these gentlemen nothing "matters." It does not "matter" if fæces, or urine, or ovarian fluid, or—with some foreign surgeons—even pus is left in the peritoneal cavity. The drainage tube will cure everything. And curiously enough, when patients die after a departure from the rules which guide most surgeons, it is anything but this eccentricity which is the cause of death. If a German surgeon leaves some pus from a pyosalpinx in the peritoneum, and the patient dies within twenty-four hours, it is by "the visitation of God," and neither pus nor surgeon has anything to do with it.

Because some patients recover after such surgical freaks, we are not bound to admit they are never, or not usually, harmless. But we have a tendency to make rules from exceptional cases now-a-days, and to prove our exception right because it is contrary to rule.

What is the influence of the abdominal incision? Small, perhaps, but yet a distinct influence. One would think that a man would want the only outward and visible sign of his work to be neat, sound and workmanlike. Whether the length of the incision influences the mortality or not, and I believe it will do so slightly, still the balance of convenience, in many ways, lies with a small incision, and of course the chances of hernia are less. To sew up an abdominal wound carelessly and slovenly is bad surgery, a source of discomfort to the patient and of discredit to the surgeon. As to the way in which it should be united, you can see ten or fifteen different ways in Germany, each with his own particular disadvantage. I still think, however, that interrupted silk sutures passing through all the structures in the abdominal wall is as good a method as any. I would urge, too, that despite the practice of Mr. Bowreman Jessett, it is well to avoid cutting through the rectus, if convenient. The natural undamaged muscle should be the best protection to the abdomen; and there is less bleeding when it is not divided. The strain on the stitches passed through it, caused when

the patient coughs or retches (as has been pointed out to me), is unimportant.

What have instruments to do with success? A great deal; sharp knives, reliable forceps that do not spring, contrivances as few and as simple as possible, to be at the same time effective, but with the important instruments, such as clamps, that may go wrong, reduplicated. It is surprising how often they do go wrong, and almost as often they cannot be replaced without delay, which may be fatal. The more resourceful the surgeon, the fewer instruments, as well as fewer assistants, he will require; and I have come to regard an excess in either as bad. They show of necessity a surgeon who lacks skill and resource. The only person one can depend upon in emergencies is oneself, and the more accomplished a man becomes the less he will have to depend on outside aids, which are so many outside possibilities of failure, so many more unknown quantities brought into the problem of how to get his patient well.

To discuss the many ways of operating, modes of after-treatment, and so forth, whose name is legion, would be a task as profitless as it would be wearisome. The profitable enquiry is rather "What qualities are common to the best operators?" And I believe the great essential to success is rapidity. I do not at all agree with men who say that time is of little importance. I regard it as all-important. It must be a factor in a case whether the abdomen is open ten or fifty minutes; there is the shock of the anæsthetic, of the prolonged operation, of the chilled peritoneum, of the admission of foreign particles from the atmosphere, the operator, the assistants, the sponges and instruments.

Mere exposure of peritoneum must count for a great deal in the question of risk. I had written the above before reading, in the *British Medical Journal* for August 27th, 1892, the interesting paper by Dr. Max Walthard, "On the Factors which produce Septic Peritonitis," in which he details experiments which tend to prove my contention—a contention very largely supported by others—that this exposure

and desiccation of the peritoneum is a great, nay, one of the greatest, factors in the production of septic peritonitis. Dr. Walthard shows that in a rabbit whose abdomen was opened and its peritoneum exposed for fifteen minutes over a moderate area, and subsequently infected with a pure culture of pyogenic micro-organisms, and the wound closed, peritonitis followed; whereas when this experiment was repeated, with this difference, that the exposed peritoneum was kept moist and at a temperature of 40° C., by an apparatus which permitted of its being in contact with steam, no peritonitis followed. Nor did peritonitis follow when he mixed with the steam either oxygen, nitrogen, carbonic acid, or infection. The peritoneum, kept warm and moist, remained clear of inflammation; nor were adhesions noticed in an aseptic operation, when the peritoneum was surrounded by a warm, moist atmosphere, either (1) between an injured surface opposed to a normal one; or (2) between two injured surfaces when left free to move in the abdominal cavity, as by peristalsis.

Dr. Walthard claims that the drying of the peritoneum is the chief factor in producing peritonitis. It is evident that the more rapid the operator the less desiccation is there of the peritoneum; and it is possible that hot water flushing after prolonged operations may be a wise precaution for those who can't or won't keep the peritoneum irrigated during an operation with hot saline solution. It will relieve shock, by the hot water being absorbed into the circulation, as well as check the tendency to peritonitis from drying and chilling of the serous membrane.

"What thou hast to do, do quickly," should, I take it, be the motto of the abdominal surgeon. Nothing essential must be shirked, the operation must be completed, but inessentials should be recognised and carefully disregarded. I have seen Mr. Greig Smith, in doing ovariectomy, put pressure-forceps on the adhesions till the end of the operation, then removing them and closing the abdomen without ligating adhesions or providing for drainage. I should not care to follow that practice; I would either tie adhesions or insert a drainage

tube. But I should object more to the practice of an equally well-known surgeon whom I have watched for over half an hour as he hunted through the abdominal cavity of a woman whose intestines were turned out, for small points of oozing that were not of the slightest moment. If we err at all, I submit we had best err on the side of speed. To waste time over fruitless discussions or general conversation during an operation is bad. If a surgeon does not know what to do in most emergencies he had better keep outside the peritoneal cavity; to inquire of colleagues about every step he must take may be polite, but it is not good surgery.

Some surgeons, especially on the continent, sacrifice everything to rapidity, but get successful results. Clamping is quicker than tying, and checks the hæmorrhage as successfully; little trouble is experienced from the necessary sloughs, and though a seemingly brutal tearing and dragging of adherent organs, or a rapid slashing followed by the application of a bundle of forceps may not be as pretty as our more elaborate operations, it is as safe, and possibly at times safer. Time is saved, shock is lessened, if clamps produce sloughing they ensure drainage, and even in the overcrowded continental wards little harm appears to follow. Another point that impresses me is the success of complete operations. Ghastly they sometimes are, fatal they sometimes may be, but I don't think them as fatal or as ghastly as incomplete ones. Patients and friends are prepared for the risk of the operating table, but when this has been surmounted they are less fitted for a later fatal issue or for the annoyance and suffering caused by incomplete operations. I am convinced, more particularly by a study of Mr. Tait's magnificent practice, that complete operations are to be aimed at if we are to satisfy ourselves, improve our methods and secure results that will best satisfy patients and their friends. From the question of mortality alone results will, I believe, be better; and if we are to shirk or decline the cases of greater difficulty and anxiety, progress will be impossible and surgery will suffer incalculably. At all risks, then, complete operations should be aimed at.

Drainage is a question on which it is difficult to make up one's mind. I think that in cases where the peritoneum has been fouled, where hæmorrhage is possible, where adhesions have existed to any extent, where hæmorrhage is present in some degree at the close of the operation, drainage is essential to success. Some operators I have seen appear to drain from "funk" on any and every occasion. I submit that after flushing the peritoneal cavity it is not always necessary to drain. When the water comes back clear and the pelvis can be dried, drainage is, as I have insisted elsewhere (Clinical Society, 1890), quite unnecessary. Where we drain more than twelve or twenty-four hours, I believe we should drain more than forty-eight. If drainage is prolonged beyond what is necessary to check bleeding and remove fluid overlooked after flushing out, we leave a track for septic infection, and we may get later on from it a nasty rise of temperature and other trouble after the wound has been allowed to close. I have seen the track of the drainage tube re-opened with the best results after such symptoms have supervened; but I believe the pain, the fever, the rapid pulse and vomiting which occurred in this case on the fifth or sixth day, and which soon subsided when the wound was re-opened and a quantity of turbid serum drained off, would not have come on at all if the abdomen had been closed without drainage when the solid ovarian tumour with no adhesions had been removed. Those cases, too, are more risky to drain when the fluid is not drawn off frequently and the tube kept empty. In draining for hæmorrhage, I take it, our object is to keep the parts dry and allow them to fall together: to check bleeding and promote coagulation in the mouths of the vessels by removing effused blood and serum as it is poured out. For this the tube must be kept clean, and I think Mr. Tait's rubber sucker far and away preferable to the glass syringes used in some hospitals, which, in the hands of most nurses, must be more irritating than the rubber tube. The latter, too, is enough to keep the track open and to break up clots: it is far less filthy and septic than the more complicated glass syringe with its cork, its cotton-

covered exhaustor, and the mixed glass and rubber tubing. In drainage of other than sanguineous discharges, too, is it not desirable to keep the tube fairly empty by exhausting it at frequent intervals? When the discharge has ceased four hours, or eight at the outside, I withdraw the tube, though on one occasion with an alarming result. Is not the best rule to drain when in doubt? Once started, however, it is well not to be in too great a hurry to stop it; while one should not drain at all without good reason.

The track of a drainage tube can generally be found if the tube remains for two or three days—I say generally, because the parts are not always sealed off by adhesive peritonitis in even this period, and I believe they may be opened up again by admission of septic material, if the tube remain in the peritoneal cavity too long. In one case I had an opportunity of seeing, where a small glass drainage tube, that had replaced a larger one on the third day, was lost, it was not found in the track of the tube but deep and loose in the peritoneal cavity, and the intestines and even the stomach could easily have been reached through the old incision, which was then four days old. Yet some surgeons insist that it is an impossibility to drain the peritoneal cavity after the first twenty-four hours. It may often be so, but I don't believe it to be generally the case, and in this and other cases I have evidence to the contrary;—*i.e.*, we can drain large areas of the peritoneum through a tube pushed down to Douglas' pouch for a prolonged period. We may drain then (1) till the track is formed, or (2) till we are satisfied that nothing comes except from the track in small quantities, in an uninfected condition; and that the general cavity of the peritoneum is healthy and without abnormal contents.

Then I associate successful abdominal surgery with little after-treatment. Fussy after-treatment is bad, worse than the other extreme of neglect. I still know of men who catheterize as a routine every few hours after operation, and give hypodermic injections of morphia with a like regularity. I know of others who give carbolyzed douches for the metror-

rhagia following removal of the ovaries. Morphia is very good for shock and unusually severe pain, but otherwise, I believe, the less it is used the better. Our exemplars, too, care nothing for temperature, something for pulse, and a great deal for distension. *That* is the symptom which gives them anxiety, yet it is one which usually gives way to a turpentine enema, if given early, or at most to a dose of calomel.

Hæmorrhage seems seldom to occur after operation, and early re-opening of the wound must be done in order to deal with it: while at the time of operation it is less feared than of old, and may usually be checked by hot water flushing, sponge, or gauze packing, or the swabbing out with a solution of iron or matico. Even the pedicle of a hysterectomy for myoma is not meddled with as of old after operation, probably because the drying and mummifying effect of the solutions of ferri perchlor., now used, prevent the former anxiety on account of a bleeding pedicle.

These are some of the points which occur to me in reviewing successful operations of many operators—success as regards mortality, at any rate. May I say, in conclusion, that I have also noticed a considerable want of respect for the peritoneum. The peritoneum is a bad master, but a good servant. If attacked boldly, yet not insanely; if accidents that happen everywhere are met and dealt with promptly, with resource and without hesitation; if it be clean, and above all, if, as Mr. Tait says, “it has time to think it over,” the peritoneum will serve us splendidly and is deserving of confidence. Certainly it has overlooked more insults and withstood more foolishness than most other parts of the body.

Sometimes I think the peritoneum in the female is more tolerant of interference than that of the male. Whether this is due to the communication established between it and the outside world by way of the oviducts, or whether it be necessitated by the exigencies of organs that are subjected to such changes in size and function, as are the female organs of generation, one cannot guess. It is a wonderful structure, with great possibilities of function and great powers of absorp-

tion—see the way in which the pulse may improve during washing out the abdomen. So rapid is this at times that, as I have ventured to put it at the Clinical Society, in the discussion before referred to, it must be by transfusion, or by means of absorption of fluids more rapid than we can at present account for. Reflect, too, on its alterations as to function under atmospheric pressures and on the currents through it, which may help some day to explain the effect of operation on tuberculous peritonitis. Think of its powers of digestion, as in the case of an extruded ovum, and of the processes by which it protects itself against foreign substances that, I believe, escape into it during life more often than we think without causing palpable mischief. The comprehension of this remarkable membrane will have much to do with the successful surgery of the future, and will enable us to put our patients into “such a condition that they cannot die.” I am grateful for your kind consideration, and hope my paper will serve the purpose for which it was written—to elicit an instructive discussion.

Dr. INGLIS PARSONS said no one could doubt the value of antiseptics who remembered what the mortality was after surgical operations some thirty years ago. Now that the sanitary arrangements were so much improved and cleanliness prevailed the necessity for them was not so great; if there were no germs present antiseptics could be dispensed with, but in some of the older hospitals Listerism was still of great value. There was no objection to cutting through the rectus; better union followed than when they had been separated at the line of junction. It was better, in his opinion, to leave the operation incomplete than to cause a fatal result by proceeding further. The drainage tube was usually shut off from the general peritoneal cavity after forty-eight hours. The improvement in the pulse that followed flushing appeared to be due to stimulation of the sympathetic. It followed too quickly to be due to absorption of fluid.

Dr. HEYWOOD SMITH, in rising to discuss Mr. Hawkins Ambler's interesting paper, would take the subjects in the

order he had mentioned them. And first as to the use of silk sutures: the majority of operators on the abdomen at the present time preferred to use silkworm-gut as being from its smoothness less liable to entangle germs, but he had noticed that Prof. Sanger of Leipsic, when operating at Brussels on a case of ruptured perineum, used fine silk sutures. On the vexed question of antiseptics there was no doubt that in many cases they were of use, and it was as well to give the patient the benefit of any doubt. As to cutting through the rectus muscle, it was sometimes difficult to hit off exactly the median line; it was therefore far better, for the rapidity of the operation, to go straight on with the operation than to waste time in hunting for the division. While on the subject of rapidity of operation he would remark that while no operation should be done hurriedly, yet as some men were more rapid in their movements than others, so they did their operations more rapidly, and, all other things being equal, such had the greater success, their patients were a shorter time under the anæsthetic, and the peritoneum was exposed for a shorter time. He agreed with what had been said as to the advantage of completing an operation when once begun, as recovery was thereby rendered more probable than when morbid products were left behind. In the use of the drainage tube care should be taken by turning it a little way round each time that the fluid was drawn off that no opportunity was given to the omentum to insert itself into the holes. When there was any considerable oozing a drainage tube should always be used, and it was remarkable, when even a considerable amount of bloody fluid was drawn out of the tube for the first twelve hours or so, how soon it became paler. It was a good plan, if the hæmorrhage was rather free, to pack either a clean sponge, or one wrung out of tincture of matico, into the pelvis, and remove it at the end of the operation. He quite agreed with what had been said as to the use of the catheter and morphia. If the patient could pass her water it was best that she should be allowed to do so, and morphia was bad as it rather favoured distension, and so masked its

value as a symptom of an on-coming attack of peritonitis. He was glad to hear that Mr. Ambler had spoken favourably of the administration of calomel; but he (Dr. Smith) would recommend it in even larger doses, as, *e.g.*, in 10gr. doses, given dry on the tongue. Given in that way it acted like a charm, and did not purge. With what Mr. Ambler had said with regard to the bleeding of the stump in cases of extra-peritoneal hysterectomy, he would remark that in subperitoneal hysterectomy—the performance of which he had lately been advocating—that risk was done away with. He might relate, if he was in order, an operation performed by Martin, of Berlin, during the recent Gynæcological Congress at Brussels, where, instead of leaving the cervix as a stump he carefully snipped down inside the peritoneal flaps till he reached the vagina, tying all the arteries as he went on with long catgut ligatures; he then passed a pair of forceps up through the vagina, and catching hold of the ligatures brought them down and out of the vaginal orifice; he then closed the pelvic peritoneum with a continuous catgut suture.

Dr. BATCHELOR congratulated Dr. Ambler upon his paper, which was calculated to evoke an interesting discussion, although he thought the opinions expressed would tend to emphasize our difference rather than lead to uniformity of procedure. The first point to which he would refer was the length of the abdominal incision, which he thought had an important bearing on the result, although for very different reasons to those stated. He considered there were probably more lives lost in attempting to complete difficult operations through a small incision than from any one other single cause. He failed to see what possible harm could accrue from lengthening a clean cut through such simple structures as the abdominal walls an inch or two as required. He was convinced that irreparable damage was often inflicted by attempting to remove diseased structures through a small two- or three-inch incision; surely it was safer in difficult cases to call all available senses to our aid—sight and touch rather than grope in the dark and tear away tissues completely

changed by disease. If one thing had impressed itself on him when watching the practice of different operators during the past few months, it was to enlarge the opening sufficiently to obtain a good view of the parts to be dealt with.

Then as to necessity for rapidity in operating, he considered this a dangerous doctrine to advance; dawdling and indecision were bad, but attempts at undue haste were nearly always fraught with disasters. He considered too much stress had been laid on the exposure of the peritoneal cavity during prolonged operations; in most cases even in prolonged operations there was little or no exposure of the peritoneum; by large flat sponges properly applied the abdominal cavity was temporarily shut off; it was extremely rare indeed for the intestines to require eviscerating or much exposure—such cases would require expeditious treatment.

The application of the germ theory to modern methods was now fairly well understood, and the only real difference between surgeons was whether they relied upon antiseptic or aseptic methods; he preferred the latter when surroundings permitted. He looked upon Mr. Lawson Tait as the great disciple of aseptic surgery. Mr. Tait's work on hospital mortality, published some twenty years since, explained his position in the matter. The results of his practice proved the thoroughness of his methods.

Much stress had been laid upon the after-treatment; the speaker considered treatment preliminary to operation of at least equal importance; to this point of late little attention had been directed. It had been pointed out by Sir Spencer Wells years ago, when a patient could be laid up a week or two, and attention paid to her general health and the excretory functions, she would make a far easier convalescence.

Another minor point as regards after treatment, one of the first signs of anything going amiss was the flatulent distension of the abdomen; this he was in the habit of relieving by a method that was hardly sufficiently appreciated—he passed a vaginal tube up the rectum, removed all dressings except those in actual contact with the wound, and applied

massage gently through the abdominal walls, and in a large majority of cases this immediately relieved a distressing and dangerous symptom.

Mr. REEVES said that as regards the incision, a case which seemed likely to prove an easy one should be begun with a small cut, which could readily be enlarged according to circumstances, and ventral hernia could be minimised by accurately suturing the peritoneum, fasciæ and muscles, and skin in separate layers. He deprecated mere rapidity of operation *per se*, and remarked that in abdominal, as in general surgery, *festina lente* was a sound motto. With regard to abdominal hysterectomy, he was glad to know that the plan of total removal of the organ, as advocated by him in the *British Medical Journal* years ago, was being extensively adopted by various continental operators with marked success; and as by this method there was no stump to cause trouble, and as a clean peritoneal cavity was left, it should pass without insistence that so important a method, if generally adopted, would make very much towards success in abdominal surgery.

Dr. MURPHY sometimes convinced people of the efficacy of vaccination by pointing out to them that since vaccination had become so general it was a most unusual thing to see persons marked with small pox, which formerly was such a common sight; and to the few surgeons who did not believe in the efficacy of antiseptics he would suggest that it is more than a coincidence that the great reduction of the mortality of abdominal operations should have commenced from the time that antiseptic surgery was adopted. Under circumstances where the wounds could be kept perfectly aseptic, excellent results would doubtless follow, but antiseptic precautions should be adopted as an extra measure of safety.

As regards the length of the incision, it was a great advantage to the patient to have it as small as possible, and an immense deal of abdominal work can be accomplished through an opening large enough to admit two fingers, when these fingers were sufficiently educated in one's early operations; the sense of sight had also to be used, but after some

experience the fingers can be relied upon for most things. In closing the wound he found silk-worm gut drawn through all the tissues by a Reverdin's needle the most satisfactory material. When necessary he flushed freely with boracic acid solution, and drained frequently. He did his operations as rapidly as possible, often tearing freely, as for example within the broad ligament, tied all large vessels, but did not mind even a copious oozing, and never lost a patient from hæmorrhage, nor found it necessary to re-open the wound. One assistant only was required, whose duty was to do as little as possible. Morphia or other drugs after operation were practically never used.

Mr. HAWKINS-AMBLER having briefly replied, the Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, NOVEMBER 10, 1892.

FANCOURT BARNES, M.D., VICE-PRESIDENT, IN THE CHAIR.

PRESENT: 12 Fellows and Visitors.

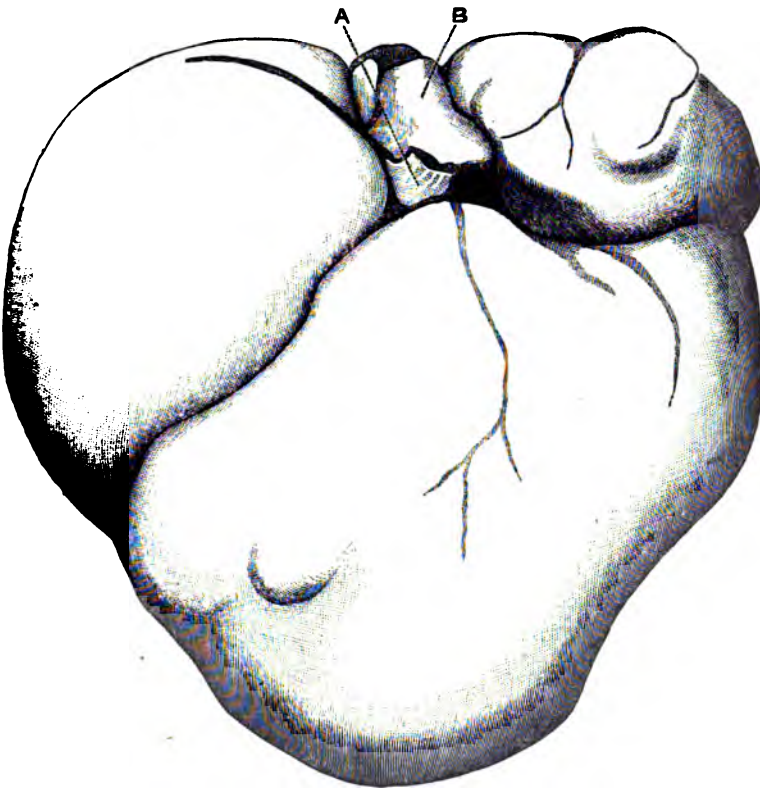
Dr. BANTOCK exhibited the following specimens:

1. Fibroma of the Ovary.

The tumour was obtained from a widow, aged 47, the mother of two children; last confinement twenty-three years ago. The patient had not been conscious of the presence of the tumour till about a year ago, and at the time of its discovery was estimated by her to be as large as a hen's egg, and situated in the right groin. It had grown rapidly, and at the time of the operation formed a prominent heart-shaped body in the hypogastrium. From its firm consistence and mobility it was diagnosed as a pedunculated fibroid. Operation February 17th, 1892. The incision had to be carried through the umbilicus to admit of the delivery of the tumour; the omentum was extensively adherent, and after separation required more than half a dozen ligatures. The pedicle, springing from the point A in the drawing, was made up of two bands, one of which was so slender as to require only a single ligature of No. 1 silk; the other, about half the thickness of the little finger, but very vascular, consisting of large blood vessels, with little besides. The pedicle was traced to the right side of the uterus and broad ligament, and on this side no trace of ovary could be found. On the left side the ovary was atrophied and corrugated. Until this stage of the operation the tumour was regarded as a uterine fibroid.

Dr. Rutherford, to whom Dr. Bantock is indebted for the

drawing of the tumour, also made some microscopic sections, and his description of these is as follows: " Besides the dense, white, fibrous tissue which makes up most of the tumour, there are, in the part we thought might be muscular tissue [from its naked eye appearance] and from which I cut out a piece for



examination, numerous rounded bodies of different sizes situated in the midst of the fibrous tissue. Each body has a sort of capsule represented by a glistening wavy band ; inside this band is an undefined granular-looking material, closely attached to the capsule in most instances. I believe these

bodies to be Graafian follicles destroyed by the pressure of the surrounding fibrous tissue."

The microscopic examination, together with the clinical history of the case, left no room in Dr. Bantock's mind for doubt as to the nature of the tumour, and he had full confidence in presenting the specimen as an undoubted example of that rare form of tumour, viz., non-malignant fibroma of the ovary.

2. Case of Molluscum Fibrosum Uterinum.

This specimen was obtained from a married woman, aged 37, the mother of three children, and whose youngest was only one year and ten months old. The patient was sent to him by Dr. Chillingworth, of Bedford. The history she gave was that about Christmas last she thought she was increasing in size in her abdomen, but she regarded it as of no consequence, seeing that all she had to complain of was that she was more readily tired on exertion and got a little backache. About five months later she complained of "falling of the womb," and then consulted Dr. Chillingworth for the first time. The tumour must have grown very rapidly, for there is no history of any complication at the time of her last confinement, and at the time of the operation it reached to midway between the umbilicus and ensiform cartilage. The cervix was rather high up and pressed forwards against the pubes, and behind it the tumour descended into the pelvis, almost filling it. The uterine body could be felt above Poupart's ligament, just to the left of the pubic symphysis.

The tumour was exposed by an incision extending from the pubes upwards through the umbilicus, and was at once seen to be covered loosely with peritoneum. As it felt very soft a trocar was thrust into it, but nothing came through it. However, on removing the instrument, two and a-half pints of a clear fluid of the colour of weak tea flowed away and was collected. The tumour was now turned out, and found to extend deep into the pelvis, between the layers of the right

broad ligament, while the uterine fundus stood out distinct on the left front at the base, and both ovaries clear. The peritoneal envelope was divided all round, and the mass enucleated, disclosing a narrow connection with the uterus on the right side about the middle of the organ. This was divided partly by the finger nail and partly by the handle of the scalpel. After the separation there was rather free bleeding from the site of the connection, and about a dozen points of suture were required to control the oozing. The capsule was stitched to the parietes, and the cavity packed with iodoform gauze.

In this instance the tumour was very much more oedematous than in the other examples he had met with, and although as much as two and a-half pints of fluid were collected from the trocar puncture, there was no distinct cavity. There was one peculiarity he ought to mention as distinguishing these tumours from the ordinary fibromas, viz., the fact that they cannot be shelled out of a capsule made up of uterine tissue, but they are connected with the uterus by a distinct pedicle which he has usually divided with the nail or the handle of the scalpel. After separation of the tumour the site of adhesion oozes freely, and requires several stitch-ligatures.

3. Specimens of Uterine Fibroids showing Degenerative Change.

(a) Half of a large tumour—in median section—removed from a widow aged 51. The tumour is of exceedingly dense structure, and the cut surface presents numerous points and lines of calcareous degeneration. The pedicle was very small, and the tumour was universally adherent; yet beyond slight tenderness on pressure there was nothing in the history to lead one to expect such a condition.

(b) A tumour of about three pounds, containing two distinct cavities, at the time of operation containing coagulated blood. The patient was single and 45 years old, and suffered severe pain which prevented her from getting about. The tumour was lower down in the pelvis, and was removed by enucleation, ligature of the appendages, application of the

serre-nœud outside the peritoneum, and suturing the peritoneal envelope to the parietes in the manner he had several times described before the Society.

(c) A tumour of about five pounds from a married woman aged 36, without issue. At the upper and anterior part the tumour presented a blanched appearance, several square inches in extent. On cutting into this part, after its removal from the body, several ounces of a serous fluid escaped from the spongy tissues. The greater part of the tumour was œdematous, but at the point in question it presented a distinctly hygromatous appearance.

(d) A tumour, which at the time of operation weighed about five and a-half pounds, removed from a single woman aged 38. In this case the change had advanced farther than in the preceding instances. When exposed its physical characters were those of a cyst, but in thrusting a trocar into it nothing flowed away. Yet on withdrawing the instrument a serous fluid flowed freely, and sixteen ounces were collected. Here the meshes were much larger, but without the formation of anything like a cyst.

These cases are presented in the order of their occurrence; (c) is an example of the early stage in which the tissues are simply œdematous; (d) shows a further stage in which the œdema has converted the tissues into a sponge-(honeycomb) like state—a true hygromatous state; while (b) furnishes an example of the formation of two distinct cavities into which the fluid collected, by, as it were, draining the surrounding tissues, and into which hæmorrhage took place at a later period. This occurrence was marked by the onset of pain, which was so severe as to completely disable her.

Dr. LEITH NAPIER narrated the case of a large solid tumour of ovary in a young woman, which was successfully removed, but followed shortly by peritoneal secondary deposits and death. He asked for microscopic drawings of the fibroma molluscum.

Dr. BURFORD related a similar case to Dr. Napier's. He also remarked on the thinness of the pedicle in these cases.

Mr. REEVES narrated two cases of undoubted fibroma of the ovary already brought before the notice of the Societies. He asked Dr. Bantock the definition of fibroma molluscum; also for details of the operation in these cases.

Dr. BANTOCK said that solid tumours of ovary in young subjects might be sarcomatous, and this explained recurrence in Drs. Napier's and Burford's cases. His own fibroma of ovary occurred in an elderly woman. He described the steps of the operation, emphasising the value of the elastic ligature to control hæmorrhage during operation. He said fibroma molluscum was different to fibro-myoma, and proposed that the specimen should be referred to the Pathological Sub-committee.

But he also pointed out an essential difference between his case and those referred to by Drs. Leith Napier and Burford, and Mr. Reeves. In the latter cases the patients were all young, or had not reached middle life, while his patient had gone far beyond it. While Dr. Napier was describing his case, and before he had used the word sarcoma, or even indicated it, he (Dr. Bantock) had come to the correct conclusion, from his own experience. He had never seen a solid ovarian tumour in a young subject that was not a sarcoma. He recalled a striking example of a young woman who was under his care some years ago in the Samaritan Free Hospital. She had a solid tumour which, on consultation, was pronounced to be a fibroid of the uterus, and not a case for operation. She returned some months afterwards in a broken-down condition, with a very high temperature, as the effect of a short railway journey. As the result of a further consultation, but contrary to his own judgment, he removed the tumour, and the patient died within thirty-six hours, with a very high temperature. The tumour was very extensively adherent to the omentum, whose vessels were enormously enlarged, and the lumbar glands were affected to such an extent that some of them were as large as a small walnut.

He would always regard with great suspicion a solid tumour—not uterine—in a young subject.

In reply to a suggestion from the Chairman, Dr. Bantock expressed his concurrence with the proposal that the tumour should be examined and reported on by a committee, although he was under the impression that our *Transactions* were already enriched by a report¹ on a similar tumour by Mr. Bland Sutton.

Dr. BURFORD showed :—

1. *A specimen of an extra-uterine gestation, with placenta retained in the Fallopian tube, the tear in which had healed without placental detachment.*

The patient was 25 years old, her last accouchement taking place five years ago. Since then she had regularly menstruated up to October, 1891, when the period suddenly stayed, she becoming pregnant. Three months after, the phenomena of labour set in, with pain to an acute and violent degree, accompanied by prolonged unconsciousness, and followed by a hæmorrhagic discharge containing fleshy masses. From this attack she recovered, only for the crisis to be repeated even more severely in three weeks' time. After her convalescence from the latter seizure, the abdomen became smaller, the breasts ceased to secrete milk, and foetal movement, which up to the second attack had been vigorous, were now entirely lacking.

The patient now regained a certain measure of health, which was, however, never very stable. Her principal troubles arose from constant backache, with recurring attacks of syncope. Coming now under the supervision of Dr. Deane, at Aldershot, the presence of a foetus in the abdominal cavity was detected, and my examination confirmed this fact. Abdominal section was performed, and a foetus of the twenty-second week removed from the peritoneal cavity, in which it lay in an adventitious sac, composed of intestinal wells agglutinated with lymph. There were no evidences of foetal membranes, and the embryo was enucleated from

¹ This report will be found in vol. iii., p. 174.

its bed, not without free bleeding. A few inches of umbilical cord issued from the navel, but the torn end was free ; no other segment of cord was to be found. On the left Fallopian tube a globular swelling, the size of a lady's fist, was discovered, and on this being ablated and cut open, it was found to contain the placenta, in soft but non-degenerated condition. There was no mark of rupture on the tube, the cavity of which seemed perfectly intact ; there were no evidences of old exudation or bleeding into the peritoneal cavity save those offered by the existence of the sac. The right appendages and the left ovary were normal. The patient made an excellent recovery.

2. A specimen of an enormous ovarian cyst containing seventy-five pints of fluid and six pounds of solid elements.

This cyst was obtained by abdominal section from a lady aged 55, with the following singular history. The menopause came on at 48, since when no uterine discharge has occurred. Three years ago she first noticed a swelling in the left flank, which tended to increase rapidly. Betaking herself to professional advice, the tumour was pronounced to be a uterine fibroid, and a course of Apostoli's electrolysis carried out, with absolutely no avail. A sojourn at Woodhall Spa was similarly fruitless, and finally, the diagnosis being still adhered to, the patient was advised to patiently bear her sufferings to the bitter end. After three years of varied treatment I saw her, and found her in the most dire distress. The abdominal girth at umbilicus was over sixty inches ; from ensiform to navel measured over a foot and a-half, and other measurements were impracticable owing to the manner in which the tumour overflowed each bodily landmark. The huge abdomen was so tensely distended as to forbid any attempt at differential diagnosis, and as a diagnostic measure merely, the abdominal cavity was aspirated, and a thousand ounces of fluid withdrawn. After a day or two the outline of a flaccid cyst was plainly to be felt, and a week later laparotomy was performed, four hundred and eighty ounces of fluid

flowing through the ovarian trocar. The cyst, which was universally adherent, was removed with some difficulty, and as it was impracticable to separate the pedicle proper from the uterus, this also was included in the elastic ligature, and the whole stump treated extra-peritoneally. The patient, on whom this ovariectomy and hysterectomy were simultaneously performed, made an excellent recovery.

The Society then adjourned.

*SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS.*

Puerperal Eclampsia.

AT a recent meeting of the Berlin Medical Society OLSHAUSEN gave the results of his study of two hundred cases of eclampsia which have been reported in a number of medical journals, among them the *Prager medicinische Wochenschrift*, 1892, No. 10. As is often observed in hospital practice, his cases came in series, the larger portion of them between September and February. Most of them were primiparæ, and especially those older than the average. Twin pregnancy was also a frequent cause. The frequency of eclampsia, Olshausen estimates as greater than twenty-five per cent. of all cases. Thirty per cent. of premature labours, he thinks, are caused by eclampsia. In five cases, out of two hundred, pregnancy was not interrupted by this complication. It is rare for eclampsia to persist after a brief period of the acute disorder.

As prodromal symptoms, were observed headache and, more important, gastric pain with frequent vomiting. Amaurosis was rarely observed. In three cases, an aura was present.

Albumen was almost invariably present in the urine. Casts were often found, œdema rarely, and icterus was observed twice.

Twenty-five per cent. of the 200 perished, and *post-mortem* examinations were obtained in thirty-seven cases. Acute affections of the kidneys were found in twenty-two of these; chronic interstitial nephritis in four. The remainder showed a mixture of acute and chronic diseases; in two cases,

the kidneys were unchanged. In six cases, a ureter was dilated, but not to a pathological extent. Nine patients died before the end of labour, and labour was terminated by Cæsarian section in one patient, and the life of the child was preserved. Most fatal cases terminated in four days after the first convulsions, although convulsions occurred as late as the thirtieth or fortieth day after labour. The complications causing death were sepsis and pneumonia, eclamptic patients being especially susceptible to septic poison.

Regarding prognosis, it is often favourable where convulsions begin soon after the birth of the child. Frequent convulsions, rise in temperature, small and frequent pulse, are signs of a fatal issue. Twenty-eight per cent. of the children born at term, died. This result is sometimes owing to morphia-intoxication, where large doses of the drug have been given.

As regards the treatment of eclampsia, Olshausen depends upon morphia, chloral, and the use of the forceps. Version is contra-indicated, and chloroform should be used only where the convulsions recur regularly. The intoxication theory of eclampsia seems most probable, and an interesting analogy is shown between the lesions of eclampsia and those of sublimate-intoxication (*Amer. Jour. of Med. Sciences*, May.)

GOLDBERG, of Dresden, in the *Archiv für Gynäkologie*, Band xli., Heft 3, and Band xli., Heft 1, draws interesting conclusions from 81 cases of eclampsia. Although more frequent in primigravidæ, the mortality is much greater in those who have borne children. Eclampsia beginning in pregnancy is most fatal; least so, when it commences in the puerperal state. Profound disturbance of the nervous system is a more unfavourable symptom than the albuminuria, dyspnœa, cyanosis, and bad pulse. The most successful treatment is speedy delivery. The forceps is especially successful for mother and child. Version and extraction were also successful. Craniotomy was less valuable as a means of treatment. Cæsarean section was followed by septic peritonitis and death. Induction of labor was success-

ful, as was also incision of a rigid os and extraction. Hot baths and packs, chloroform, chloral, and morphine were reliable agents. Large doses of morphine should be avoided, as collapse sometimes follows their use.

In the *Zeitschrift für Geburtshülfe und Gynäkologie*, Band xxiii., Heft 1, PRUTZ describes in detail the condition of the kidneys in 22 cases of fatal eclampsia. While acute and chronic processes were present in many, in many others there was no pathological condition in the kidneys sufficient to account for the eclampsia. In many cases, congestion and transudation of serum seemed the condition present. Micro-organisms were absent. There was no relationship between the severity of the eclampsia and the extension and severity of the pathological lesions in the kidneys: many of the severest cases of eclampsia showed but slight alterations in the kidneys.

In the kidneys of infants born during eclampsia were found an absence of inflammation; epithelia intact; a great number of hyaline casts and enormously distended veins; infarcts of uric acid were also present. The lesions seemed to be those of intense congestion and transudation of serum.

GERDES (*Münchener med. Wochenschr.*, No. 22, 1892) describes the bacteriological examination of an interesting case of eclampsia in which extensive lesions of the kidneys and liver were present. He cannot account for the condition except as the result of an infective process, some of whose germs he isolated and describes. Further light can be shed upon the causation of eclampsia by the study of infective processes and the relation of bacteria to them (*Amer. Jour. Med. Science*, Aug.)

Experimental Researches in a Case of Puerperal Nephritis.

In the *Archives de Tocologie*, 1892, No. 2, CHARPENTIER, describes the case of a patient taken with infectious nephritis after labour. Her temperature was high, she had frequent chills, and albumen in the urine. With a view to determine the cause of this infection, examinations were made of the

blood and the urine, and culture experiments were employed which gave negative results. An effort was then instituted to test the toxicity of the patient's urine, and, following Bouchard's methods of experiment, rabbits were inoculated with the urine, which was injected into the marginal vein of the ear. The injections were followed by tetanic convulsions and speedy death, respiration stopping before the heart failed. Rigor mortis developed rapidly, the animal remaining in the posture assumed in the moment of death. On examining the kidneys, ecchymoses were present beneath the capsules. On section, the organs were pale and anæmic; the urine of the animal taken at the moment of death was slightly albuminous. Microscopic examination of the kidneys of the animal showed nothing but acute congestion. Injections of the patient's urine under the skin of other animals resulted in the same manner, with the exception that death occurred after a longer interval.

Regarding the clinical history of Charpentier's case, the patient did well for eight days after labour, when chills and fever supervened; no lesion could be found of the genital tract, and involution of the uterus continued with regularity. The lochia were normal. Vigorous antiseptic treatment was at once employed, and it was not until the thirty-fourth day after labour that albuminuria occurred, accompanied by symptoms of uræmic intoxication. (*Ibid.*)

Puerperal Tetanus.

In the *Archives de Tocologie*, 1892, No. 3, VINAY reports the case of a multipara, aged 36 years, who suffered from abortion during the second month of her fourth pregnancy. She had hæmorrhage for several days, and did not know the exact time of the abortion. No interference was practised at the time; the lochia shortly afterwards became foul, and the uterus was curetted under chloroform anæsthesia. Portions of retained membrane, decomposed, were removed, and an hour afterward the patient had a violent chill. The second day after the curetting she suffered from pain in the masseter

muscles; trismus and spasm of the pharynx with difficult deglutition soon followed. The general symptoms of tetanus rapidly supervened. The pulse was 108, the temperature $98\frac{5}{10}^{\circ}$. Thirty-six hours after the appearance of the first symptoms the patient died. No autopsy was obtainable. Vinay has collected 106 cases; 47 of these occurred after abortion, 59 after parturition at term. The first three months of pregnancy is the most susceptible period, and the patient during the first half of pregnancy is in much greater danger of tetanus than subsequently. Tetanus most frequently follows some minor manipulation, and hence comparatively few of the cases occur in maternity hospitals, as most of them are treated at their homes. Artificial delivery occurred in most instrumental cases, and next in frequency was the use of the tampon; the forceps and version do not predispose to tetanus, while Vinay could find but one case of craniotomy so complicated, and but one case of Cæsarean section. Multiparas above the average age are most often attacked. The most important influence in predisposing to tetanus is the wretched surroundings of patients who suffer from it, and especially living in damp and squalid lodgings. There seems reason to believe that trismus may be conveyed by contagion, as in a case reported by Henricius. Amon also reports a case of artificial delivery of a placenta, where he seemed to convey the poison of tetanus from the wounded hand of the husband, which he had dressed, to the mother's uterus. Tetanus is also most frequent in the tropics, where the condition of the soil seems favourable for the development of telluric bacteria.

Puerperal tetanus usually develops during the first week after labour, and becomes acute or chronic. The prognosis is doubtful, and usually hopeless. Out of 106 cases, 94 proved fatal, a mortality of 88 per cent. The mortality of abortion complicated by tetanus is 1 per cent. greater than that of labour at term under similar circumstances. The diagnosis may be doubtful in cases of severe hysteria; in prophylaxis, the employment of antiseptics and the precau-

tion that a physician attending a tetanus patient should not attend confinement cases, will be sufficient. The treatment consists in antisepticizing thoroughly the genital tract, and in the employment of sedatives. Prophylactic inoculations with cultures of the bacillus of tetanus have not yet been extensively employed. (*Amer. Journ. Med. Sciences*, July.)

The Question of Craniotomy.

In the *Archiv für Gynäkologie*, Band xli., Heft 3, BÁRSONY contributes an interesting paper on "Craniotomy," based upon 46 cases occurring during the last sixteen years in the obstetric clinic at Buda-Pesth. The mortality in these 46 cases was 8, or $17\frac{8}{10}$ per cent.; the causes of death were rupture of the uterus in 4, septic infection in 4; in only 1 case did the infection occur after admission to the clinic, which reduces the mortality for which the clinic was responsible to 1 out of 46 cases, or $2\frac{1}{10}$ per cent. The cases are reported in detail, and the arguments for and against craniotomy and the Cæsarean section are fully stated. The recent literature of the subject is clearly summarised, and Bársony concludes that the Cæsarean operation is not one which the average practitioner can perform with safety in the ordinary dwelling of the poorer classes. He accepts the most favourable statistics of the Cæsarean operation—namely, those of Leopold of Dresden, who has a mortality of 8 per cent. Bársony concludes that when the *conjugata vera* is not less than seven centimetres that spontaneous labour is not impossible; that when the *conjugata vera* is six centimetres the Cæsarean operation is safer than embryotomy; but that when the *conjugata vera* is more than six centimetres, but the spontaneous expulsion of the child fails, unless the patient be in a hospital where she can have the advantages of the best surroundings, craniotomy should be performed. The patient should afterwards be kept under observation, and labour should be induced in ample time to secure the birth of a living child. As in Cæsarean section, so in craniotomy, previous ineffectual

attempts at delivery with forceps seriously damage the mother's chances of recovery. (*Ibid.*)

Hypertrophy of the Heart in Pregnancy.

The *Medical Press* says :—" The assertion has been made by various writers that hypertrophy of the heart takes place during pregnancy. An attempt has recently been made to place the statement on a firmer basis than it has hitherto enjoyed. With the object of determining whether such hypertrophy is really existent or not, Max Dreysel has, under the direction of Prof. Bollinger, made an inquiry into all reports of autopsies on women who have died in labour or childbed in the Munich Hospital during the years 1879-91. All such cases as presented acute or chronic alteration of organs that might lead to cardiac changes were rejected. The heart was measured in 76 cases, and weighed in 57, and the conclusions reached were as follows :

"In both pregnant and lying-in women slight excentric hypertrophy of both ventricles is the rule, the increase in bulk of the left ventricle exceeding that of the right. The increase in weight per kilo of body weight amounts to 0.44 grammes, or 8.8 per cent. The hypertrophy affects the thickness of the wall as well as the length, measuring along the inside of the ventricle, and the width of the cavity is unchanged.

"The increase in the size of the heart is proportional to the increase of the body of the worker.

"The hypertrophy is specially marked in young, well-nourished, strong people, the influence of age and body weight remaining the same; it is more difficult for hypertrophy to take place if the individual is weakly or debilitated.

"The hypertrophy progresses with the duration of the pregnancy, reaches its maximum at the close, diminishes in childbed, at first rapidly and later more slowly.

"With the expulsion of the uterine contents the mass of both ventricles diminishes; with the commencement of lactation a sudden diminution again takes place.

"The author considers the hypertrophy to be due to inclusion of the placental circulation and the increase in the quantity of the blood, as hypertrophy and enlargement of the right ventricle can only be explained by increased fulness of blood."

Dr. E. W. MARTIN, of Fremont, Nebraska, describes an interesting case of twin pregnancy, one foetus in utero and the other extra-uterine, in a woman aged 40, who had previously had three children and a miscarriage, the last pregnancy being five years before. She became pregnant in the middle of February, 1890. On April 30th Dr. Martin saw her for the first time. To use his own words:—

"When I first saw the woman, on superficial examination I thought it a case of septic peritonitis. The vital phenomena were—suffering, general prostration, and an unlimited degree of pain manifest. I found her lying upon her back, unable to be moved or touched, emaciated and suffering intense pain in the region of the ovaries, and particularly in the right hip. Absolute constipation had existed for twelve days, accompanied by excessive vomiting. The tongue was coated with a heavy fur in the centre and normal colour on its edges. She was having considerable metrorrhagia, which had begun a fortnight before. By vaginal and rectal examination I diagnosed a retroverted, impacted, gravid uterus. By the knee and chest position, after two days' effort, I was able, in a great measure, to replace the organ. Symptoms began to improve, the vomiting ceased, and, by a copious injection *per rectum*, the bowels were moved, and, with a little encouragement, they soon resumed some degree of regularity. Her appetite returned, and, within ten days, the patient was up and walking about the house and yard. Immediately upon her effort to be on her feet her right leg began to swell, and assumed alarming proportions. Her foot, ankle and leg to the knee presented marked œdema. With but slight improvement, this state of facts continued until July 18th, when I was suddenly called, and found her with all the symptoms of labour. I should have stated that at intervals of every five

or six hours, slight hæmorrhage from the uterus had continued from the time I first saw her, until the present. The labour symptoms now continued until the 23rd, when a five months' fœtus was expelled. The placenta presented the appearance of having been partially detached, which doubtless accounts for the continued hæmorrhage. The placenta came away with the same pain which expelled the fœtus, when all pain ceased, followed by little hæmorrhage. For two days, I irrigated the uterus with antiseptic lotions. My attention was called by the patient to the fact that she was having quickening, as though another child existed in the uterus. On placing my hand upon the abdomen I was convinced beyond a doubt that her conjectures were not entirely groundless, as the movements of the child could be distinctly felt at this juncture. However, the patient got up; within five days, the swelling disappeared from the limb, she gained in flesh and strength until the 17th of August, when pain began in the region of the right ovary, considerable pain in the right hip, back and right limb. Gave morphia to relieve pain. By digital examination, or by any other process, I was unable to say whether I had ectopic pregnancy or not. The os was lax and flabby, and although I could pass my finger well up through it, I could find nothing within reach, and doubting the propriety of exploring with the sound, I immediately wrote a history of the case and sent it to Dr. Thaddeus Reamy, of Cincinnati, Ohio, asking him what he thought I had—whether double pregnancy with more than one placenta a bifid uterus, or extra uterine pregnancy. If the latter, he thought at this stage 'it must be of the so-called abdominal variety. He, like Lawson Tait, believed that primary abdominal pregnancy rarely if ever occurred, such cases usually being due to early rupture of the Fallopian tube, and escape of fœtus into the abdominal cavity.' He advised me not to explore the uterine cavity, but to watch the case, as he believed it to be one simply of plural uterine pregnancy. Upon this theory I relied only for a short time, when I made my diagnosis ectopic pregnancy. In the meantime, the or-

dinary symptoms had been going on, unmistakable quickening, placental souffle, foetal heart sounds, and progressive increase in size. When I made my diagnosis then trouble began. Consultation was demanded, and the ordinary routine indulged in. Dr. L. B. Smith, of my city, was called in, and three talented physicians from Lincoln, Neb., Drs. Peebles, Mitchell and Giffin. Suffice it to say, the case was so difficult of diagnosis that we were divided in opinion, some holding to the theory of bifid uterus, and others to the ectopic theory. Dr. Peebles was not called until September 25th. On September 26th (the next day) rupture of sac occurred, followed by great pain and collapse. September 27th, at 8.30 p.m., death occurred. On Sunday, September 28th, I called all who were in consultation, and a *post-mortem* was held which developed the following:—

“Extra uterine pregnancy of seven and one-half months’ gestation, remaining after the expulsion, more than two months previously, from the womb of a foetus of a uterine pregnancy. The developments of the two foetuses would indicate that conception had taken place at the same time and from all the circumstances this theory is the most plausible. Abdominal section displayed a ruptured chorion and escape of foetus and liquor amnii into the abdominal cavity among the viscera. The foetus was easily removed from among the intestines. The chorion was found to have many adhesions to both the parietes and viscera. Evidence of an old peritonitis having existed in the region of the right ovary was patent. The adhesions developed the impossibility of a successful operation of laparotomy being performed at any time after the expulsion of the first foetus. At no time previous could a correct diagnosis have been made. With a child *in utero* no man would have risked his reputation to say there was another also in the abdominal cavity. Another singular incident now presented itself. The umbilical cord was bifurcated and led to two placentas. The first, of small development, weighing about three or four ounces, had attached itself to the folds of peritoneum about the left broad

ligament; the other, weighing two or three pounds, found its attachment in Douglas' *cul-de-sac*. It would seem at the time of conception that at least one of the ova, in its transit from the ovary to the uterus, was arrested in that portion of the Fallopian tube passing through the walls of the uterus; there it became fructified, and the development began. This would be called interstitial pregnancy. The *post-mortem* demonstrated this to be true. As the muscular fibres of the uterus became stretched and distended it formed an outer covering of the ovum, and accounts for its going to that long period of seven months before rupture, as it is very susceptible of distention—at least it seems so in this case. A thin layer of uterine muscular fibre was found surrounding nearly the whole of the sac, notwithstanding the fact that it is asserted by some of the most eminent authorities that no placenta having primarily attached itself to the tube or peritoneum can attach itself to any other structure; how can we account for the firm attachment of this one in Douglas' *cul-de-sac*? Was that its primary location? If not, how did it get there? The divisions and subdivisions of ectopic pregnancy, as found in most standard text-books, tend to confuse the medical mind, for such classifications are not sustained by facts correctly observed. It is not my purpose in this paper to speculate or philosophize, but I have attempted to give you all the facts, as far as I was able, connected with this most interesting case. So far as I have looked up medical literature, there has been no case like it."

Sudden Death during the Puerperal State.

EHRENDORFER (*Wiener medizinische Presse*, 1892, Nos. 20 and 21) calls attention to fatty degeneration of the heart muscle as a not infrequent complication of pregnancy, and describes a case of sudden death in a puerpera from thrombosis of a cerebral sinus occurring in connection with fatty heart. The patient was a young primipara whose labor was normal. On the tenth day after labor she left her bed, and

on the eleventh day she was suddenly seized with syncope, headache, and sensations of cold. She afterward vomited, had unequal pupils, convulsions, paralysis, contractures, and symptoms of profound depression in the central nervous system. A moderate rise in temperature occurred also. Death ensued seventeen hours after the first attack of unconsciousness. The post-mortem revealed an entire absence of septic infection and inflammation, no abnormality was discovered in the pelvic organs. Simple thrombosis of the falciform sinus and veins of the dura and pia mater, with subdural and intermeningeal hemorrhage, was present.

Perineorrhaphy during Pregnancy.

WEIL (*Prager med. Wochenschrift*, 1892, No. 11) reports an interesting case of laceration involving the sphincter and recto-vaginal septum, in which he operated in the fifth month of pregnancy, the patient being delivered at term without injury to the perineum. He regards the operation as justifiable during pregnancy when the patient is rapidly losing her strength from diarrhœa, so that abortion is imminent, and if she suffers severely from the loss of perineal support. The danger of infection during labour, by reason of the communication between the rectum and vagina, is to be borne in mind. Care during the delivery of the head, with the performance of episiotomy, ought to prevent a second laceration. (*Amer. Journ. Med. Sciences*, June.)

Myomectomy during Pregnancy.

STRAUCH (*St. Petersburger medicinische Wochenschrift*, 1892, No. 10) reports the case of a patient four months pregnant who complained of pain in the left side of the abdomen. The fundus of the uterus was found midway between the pubes and the umbilicus. A tumour the size of a large goose's egg, easily movable and painful, was felt at the left side of the uterus. The tumour increased while the patient was kept under observation, and gave a sense of

indistinct fluctuation, while her pain grew more acute. It was then thought to be a rapidly growing ovarian cyst. Upon laparotomy a subserous pedunculated fibroid presented at the abdominal incision; its pedicle was ligated, the tumor removed, and the peritoneum stitched over the stump. The operation took but little time, and was followed by uninterrupted recovery. The rapid growth of the tumor had been occasioned by the stimulus of pregnancy; the patient went on and completed a normal pregnancy (*Amer. Jour. Med. Science, June.*)

Ovariectomy during Pregnancy.

The Journal of Gynecology of September, 1891, has an interesting article by Dr. Christian Feuger, based on a case of a patient four months pregnant from whom a dermoid cyst was removed. She went on to full term and was delivered by forceps of a six-pound child. Ovarian tumours complicating pregnancy are at that time subject to acceleration of growth, and seriously impede delivery if in the minor pelvis, or the gravid uterus may cause torsion of the pedicle circulatory disturbance, gangrene or perforation of cyst, &c. The following statistics collected by Feuger show the danger.

Litzmann, 54 cases with 24 maternal deaths.

Jetter, 215 deliveries in 165 mothers, 64 deaths.

Playfair, 57 deliveries, 23 deaths.

Braxton Hicks, 6 deliveries, no deaths.

Rogers, 5 deliveries, no deaths.

Spencer Wells, 11 deliveries, 1 death.

Fitsch, 4 deliveries, 1 death.

In all 350 deliveries, 113 maternal deaths, or a mortality of 32 per cent.

For the children the mortality (Engstrom) is 48 per cent. in 216 cases.

Proliferating cystoma is the most common and is frequently overlooked, but as they are located outside of the small pelvis they are not liable to prove a serious impediment to delivery.

Small *dermoid* cysts located in the small pelvis are the gravest complication of ovarian tumours with pregnancy. Jetter found 37 dermoid cysts in 165 cases. Puncture of dermoid cyst is dangerous, as its contents are irritating, but it is often necessary to do so to accomplish delivery, if it does not rupture spontaneously, as it may. If it ruptures, septic peritonitis may result.

Treatment.—Producing abortion or premature labour and then doing ovariectomy as recommended by Barnes, subjects mothers to serious dangers. In five cases cited by Olshausen two mothers died.

Puncture of cyst is of only temporary advantage, not more dangerous in pregnancy than at other times, but puncture of such in general has a mortality of 19 per cent., and according to Cohn one out of every *six* ovarian cysts is malignant. Again there is danger of mistaken diagnosis and puncturing the uterus. The best chance is ovariectomy.

Umbilical Infection.

In the *Archiv für Gynäkologie*, Band xli., Heft 3, ERÖSS publishes his results from the study of umbilical infection in 1,000 infants. Careful measurements of temperature in these cases showed a large number of febrile patients, in most of whom no disease was evident. In only 32 per cent. were normal and undisturbed drying and cicatrization of the cord and umbilicus observed. In 14.7 per cent., inflammation of the connective tissue about the umbilicus was present.

After comparing various methods of treating the cord, it was found best to leave it not longer than three-fourths of an inch, to ligate with linen tape which had been thoroughly impregnated with bichloride of mercury, and to envelop the stump in a dry dressing, or a piece of clean, dry linen cloth. It was also found useful to cleanse the tissue about the umbilicus with 1 in 1,000 bichloride, envelop the cord in sterile cotton, and cover the dressing with sheet rubber, to protect it from contamination.

Although gangrene of the umbilicus rarely occurred, yet septic infection through this channel, with subsequent complications, was not infrequent. The mortality from this source in two large clinics is stated at 25 and 30 per cent. Of these, 70 per cent. showed no symptoms of external inflammation, while 50 per cent. presented inflammation of the umbilical vessels.

In preventing umbilical sepsis the greatest importance is laid upon a rapid and complete drying of the stump of the cord. Next in value is thorough cleanliness. In hospitals, those nurses who attend lying-in women should not care for their infants; all obstetric nurses should pay especial regard to the antisepsis and cleanliness of the umbilical region of the newborn. It is curious to observe that the mothers of these infants showed no signs of puerperal sepsis.

NOTES AND NEWS.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS. The fifth annual meeting was held at St. Louis, Mo., September, 20-23, 1892, when Dr. George H. Rohé, of Catonsville, Md., read a paper upon "The Relations of Pelvic Disease to Psychical Disturbances in Woman."

The author pointed out the frequency with which bodily conditions influenced mental states. Thus a torpid condition of the intestines, Bright's disease, putrefactive processes in the intestinal canal, &c., might give rise to melancholia and other disorders of the mental functions. It is not irrational to suppose likewise that diseases of the female sexual apparatus would have a not inconsiderable influence in the production or perpetuation of mental disorders. As a contribution to the knowledge of the subject the following report was submitted.

In a hospital containing 200 insane women, 35 were subjected to vaginal examination, and 26 found with evidences of pelvic diseases. In 18 of these the uterine appendages were removed with the following results.

Sixteen recovered from the operation and 2 died. Of the 16 recovered, 3 have been discharged from the hospital completely restored, both physically and mentally. In 10, considerable improvement followed the operation in both physical and mental conditions, and in 3 the operation was of too recent a date to allow any definite expression of opinion.

The mental disorder present in the 18 cases was melancholia in 6 cases, simple mania in 1, puerperal mania in 4, hysterical mania in 1, periodic mania in 2, hystero-epilepsy with mania in 1, and epilepsy with mania in 3.

The author, basing his opinion upon his experience, concludes as follows :

"The facts recorded demonstrate, first, that there is a fruitful field for gynæcological work among insane women ; second, that this work is as practicable and can be pursued with as much success in an insane hospital as elsewhere ; and third, that the results obtained not only encourage us to continue in the work, but require us, in the name of science and humanity, to give to an insane woman the same chance of relief from disease of the ovaries and uterus that a sane woman has."

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THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, NOVEMBER 24, 1892.

W. A. DINGLE, L.R.C.P., VICE-PRESIDENT, IN THE CHAIR.

PRESENT: 14 Fellows and Visitors.

Dr. A. FAUSSETT was proposed for election.

A Large Sarcoma of the Uterus.

Mr. REEVES showed this specimen. The patient was single, and aged 52. She complained of a sanious and foetid vaginal discharge. On examination, a mass, apparently attached to the right side of cervix and extending just beyond the vulva, was felt, and taken to be a pedunculated epithelioma. At the operation, a considerable abdominal tumour was observed, and the patient said she thought nothing of it, as it had not caused pain. The vaginal growth was removed and found to be inverted, as its attachment was to the postero-left side at the vulvar orifice, and its larger part near the cervix. Microscopic examination by Dr. Dalton proved it to be a spindle-celled sarcoma. After lingering some weeks in a

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very cachectic condition the patient died from exhaustion and septicæmia. The interior of the womb contained offensive sloughy masses and *débris*. Histologically, the uterine growth was a spindle-celled sarcoma. During life the cervix could just be felt behind the symphysis, and as the organ was immovable, dilatation, curetting, and washing out could not be done. The interest of the case is pathological, and whether the original uterine growth was fibroid, and had undergone sarcomatous degeneration or not, the existence of the vaginal growth may have been due to an original genital sarcomatosis (the lumbar glands were invaded, and there were one or two nodules in the lungs), or it may have originated in an infection through an abrasion at the vulvar orifice. The uterine tumour was very much the larger, and most certainly the older, though size alone is not a positive test. Mr. Reeves also related a case of large unilocular ovarian cystoma, in which hæmorrhage was the chief symptom. There did not seem to be any uterine or general cause for this, and bleeding did not recur during the six weeks the patient was in hospital after operation, nor has she complained of it since.

Dr. HEYWOOD SMITH wished to ask Mr. Reeves what was the length of the uterine cavity, as it was not improbable that a soft polypus existed near the fundus which would account for the hæmorrhage, and the removal of the tumour would account for its cessation.

Dr. ROUTH and Mr. JESSETT commented briefly on the case, and Mr. REEVES replied.

Dr. PARSONS read the notes of a case.

Absorption of a Large Fibromyoma by Apostoli's Treatment.

Apostoli's treatment is now so firmly established and extensively practised that it seems almost unnecessary to bring forward any more cases. The following, however, presents some points of interest, and the result is more favourable than we usually expect from this method of treatment.

Mrs. B., sent to me by Dr. R. Barnes, aged 35, married;

has had two stillborn children. Menstruation has been regular but scanty, and she has suffered from dysmenorrhœa for the last few years. She now complains of swelling in the abdomen, more or less constant pain in the left iliac region, and some irritation in the bladder.

On examination, the uterus is found to be considerably enlarged, and rises up to the level of the umbilicus. The swelling is smooth and pear-shaped at its upper end, but the lower segment on the left side is hard and nodular. The sound passes three and a-half inches.

From the 8th April, 1892, to the 13th May, 1892, eight applications in all were made with the constant current, five with the positive pole within the uterus, and three with the negative. The large external electrode was placed over the abdomen. The patient, who is a very sensitive woman, was unable at first to stand more than fifty milliampères, and this was kept on for ten minutes at each application. After the fourth, the strength of the current was raised to sixty, and at the last application (13th May) to seventy milliampères. I saw her again on the 20th June; she then said that she had more pain than usual after the last application, followed by an increase in the swelling. She rested in bed for a fortnight, when it gradually went down. On examination, the tumour was found to have nearly disappeared, and barely reached the level of the pubes, instead of the umbilicus. The left side was still nodular.

July 21st, 1892.—She came to see me again. No trace of the tumour could be felt; it had entirely disappeared. Her pains had gone, and she was free from irritation in the bladder.

Oct. 19th, 1892.—I sent her on to see Dr. Robert Barnes again, and he agreed with me that the tumour was entirely absorbed.

Remarks.—When successful cases by this treatment are published, its opponents are apt to question the diagnosis. Happily, in this case, it was made by so eminent an authority as Dr. Robert Barnes. It may, therefore, be accepted that

this was undoubtedly a large fibromyoma. The age of 35 shows that the menopause was too far off to exercise any influence in producing absorption. An interesting point in this case was the great sensitiveness to electricity, and the comparatively mild current applied, and I have noticed in most cases that the treatment is more successful when this is the case. So brilliant a result as total absorption of a large tumour like this does not often occur. It has only happened once before to me, and in that instance the patient was also very sensitive to electricity and unable to bear more than sixty to one hundred milliamperes.

It is hardly necessary to point out the advantages of Apostoli's treatment as exemplified by this case. At 35, in the full tide of sexual activity, she remains a complete woman, instead of being reduced to impotence by the removal of the appendages, and she loses her tumour without running the tremendous risk and mutilation involved by hysterectomy.

There are, of course, cases where Apostoli's treatment is found to be unsuitable, and surgical measures become necessary, but I maintain that it is unjustifiable, considering the benefits that can be attained by Apostoli's treatment without appreciable risk, to subject a patient to either removal of the appendages or to the great risk of hysterectomy until electricity has been given a fair trial.

Dr. ROUTH said, in the face of the paper read, so practical and convincing, he (Dr. Routh) could not but be astonished at the prejudices of some members of the profession against electricity. A new disease, electrophobia, seemed to have attacked some of these, and it was especially the case with abdominal surgeons. One reason was that although some of them had tried electricity in the past, they really had never mastered its details, especially Apostoli's method. They employed indiscriminately either poles, forgetting that the negative pole promoted secretion and menorrhagia and dilatation of the cavity, whereas the positive diminished secretion, arrested menorrhagia, and contracted the cavity, the positive often requiring to be used first, and the negative later on—

although both combining to effect the cure—and neglecting antiseptic measures, and using often too high a power and for too long a time. Now it was indubitable and incontrovertible that electricity—*i.e.*, the constant current—did thoroughly and radically cure some cases. The case that night recorded was an instance. It was equally true that it failed in other cases. But was this not true also of hysterectomy or removal of the appendages, especially after incomplete operations? This did not always appear, however, because some men, and he knew of one instance (the operator being now dead), who got over these cases by giving them all the *soubriquet* of “exploratory operations,” especially where they proved fatal. Again, who was there in the profession almost (among the gynæcologists) who had not been consulted by women mutilated by these operations, and who were often not cured, and as ill, if not worse, than before, although, in fairness, he must say that several were radically cured also, as were some of those treated by electricity. Then other patients had told him that the operations had been performed upon them without their being previously informed of their exact nature, of the full extent of the mutilation possible, even when unintentional on the part of the surgeon; otherwise they would never have consented. We should also not forget that even in those cases treated by electricity, and which it failed in curing, their strength and physical powers were often so recuperated that they lost nearly all sense of discomfort from the presence of the tumour, and together with the comforting assurance that they were not mutilated, were left fully able to perform their work—even heavy work like laundry work—could take long walks, &c. One lady with a tumour reaching to the ensiform cartilage could sing beautifully, and with a most powerful voice. What was, therefore, the conclusion of the whole question? Was it right to try a mild measure first to see if it succeeded before trying the more dangerous one? Most certainly, yes. Then the rules he would lay down were: (1) Explain fully to patient and friends beforehand what you intend to do, and what, as

you proceed, and according to what you find, you may have to do. (2) Try first the electrical method of Apostoli, if you think it is likely to do any good; and (3) if it fails, or appears unlikely to succeed after full consultation, perform castration on one or both sides, or hysterectomy. This appeared to him to be the only honourable and philosophical course to pursue.

Dr. HEYWOOD SMITH asked what sort of sound Dr. Parsons used—whether one of platinum, or one of the carbon sounds introduced by Apostoli? It was very important also to determine which method of applying the current was the more likely to induce absorption—whether by electrodes inside the uterus and outside the abdomen, or by the puncturing of the tumours by means of insulated needles. He had seen in several cases absorption follow the removal of the uterine appendages, even when the operation had taken place near the menopause. Then, again, it was important that observations should be made as to the situation of the tumours that were most amenable to the treatment. Excluding sub-peritoneal tumours, which were scarcely affected, did they get the best result in cases of sub-mucous tumours, where the stimulated contractile tissue of the uterus might tend to extrude the tumour, or might they look for equally good results in the cases of intra-mural tumours; and was the result brought about by the contractile tissue bringing pressure to bear on the tumour, and so interfering with its nutrition, or did the current affect the tumour itself in some hitherto unexplained way?

Dr. BATCHELOR, Mr. JESSETT, and Dr. MAUNSELL briefly commented on the case.

Dr. INGLIS PARSONS, in reply, said that he did not think the result obtained was produced by contractions of the uterus, but by a direct influence of the electricity over the nutrition of the tumour. He did not advocate galvanopuncture for these tumours except in special cases. The electrode he used was of his own design, and composed of a copper stem, insulated with a platinum end. The handle is

larger than Apostoli's, and gives more command. The hæmorrhage in these cases might be caused by polypi, but in his experience it was the exception to find them. He had described the class of cases that were suitable in a paper in the *Lancet* of this year.

The following paper was then read :—

Cystic Formations in the Broad Ligament: their Frequency, Diagnosis and Treatment. By FERD. C. BATCHELOR, M.D.Durh., M.R.C.S.Eng., Lecturer on Midwifery and Gynæcology, University of Otago, New Zealand.

MR. PRESIDENT AND GENTLEMEN,—It is incumbent on me before entering on the difficult subject selected for this paper, to offer some explanation of my reasons for so doing—the more especially as I have no new facts or observations to lay before you.

Although to those accustomed to surgical abdominal work, the morbid conditions, to which it is my intention to refer, are no doubt well recognised, I would yet venture to assert that the relative frequency with which cystic formations occur between the layers of the broad ligament is still curiously under-estimated, that the attention of the profession generally has been but little drawn to the subject, and that methods for dealing with these cases have not been satisfactorily determined. To the English general practitioner this may not be a matter of great practical moment, but it is far different with his colonial *confrère*.

In the Colonies, the exigencies of our practice not infrequently demand the performance of operations which here fall into the hands of specialists; therefore to us it is of the utmost importance that the more common conditions liable to be encountered should be well recognised, their dangers and difficulties appreciated, and if possible lines of appropriate treatment formulated.

Recognising that this Society exercises a wider influence than a mere medium of intercommunication between members

present at your meetings, knowing well that a large body of practitioners look to you for an authoritative opinion on these matters, I have ventured to bring the subject under your notice with the object of eliciting rather than of affording information.

From a personal experience extending over some years' Colonial practice, during which I had operated upon, or assisted with, some 300 cases of abdominal section, it appeared to me the proportion of cases in which cystic formations in the broad ligament were found, was largely in excess of that usually reported, and I was at a loss to account for this apparent discrepancy ; for the past six months, however, it has been my privilege to view the work of surgeons here and in the States, and it has been quite evident that the form of cyst formation is met quite as frequently in your practice as it has been in mine. If we exclude from consideration large cystic formations distending the abdomen, and also the smaller growths within the true pelvis, and then strike an average of operations performed on cystic tumours of pelvic origin whose summit reaches to, or somewhat near to, the umbilicus, it is my belief we should be well within the mark in stating that in half of these cases the cyst formation is situated between the layers of the broad ligament, and does not project from behind its posterior layer, as is the case in a simple ovarian tumour.

If this statement is even approximately correct its general recognition is of immense importance.

A surgeon without much experience in abdominal work undertakes an operation anticipating a small and easily removable tumour. The literature on the subject would not have prepared him for the frequency with which these growths are involved in the fold of the broad ligament, and, as a consequence, the condition would be probably unrecognised until futile attempts at removal had inflicted considerable unnecessary damage.

As to the pathology of these conditions a very brief statement will suffice. Mr. Bland Sutton recognises three chief types of cyst formation from the pelvic organs :

(1) The oophoritic, where the disease originates in the cortical or egg-bearing portion of the ovary, comprising the majority of simple ovarian tumours.

(2) The paroophoritic, from the medullary portion of the ovary, tending to burrow between the layers of the broad ligament, and characterised by the formation of warty growths.

(3) The parovarian, from the foetal relics in the mesosalpinx, a structure which they distend as they grow.

It seems questionable if the knowledge of mode of formation of these growths has so far been of much practical aid; also if cystic degeneration of the oophoron may not under certain conditions spread in the broad ligament. Certain it seems to be that cysts containing fluid with usual characteristic appearance of ovarian fluid, are now and again found covered by a layer of peritoneum.

For the purpose of this paper, cyst formations from the pelvis may be divided clinically into three chief groups:—

1st. The large ovarian tumours distending the abdomen.

2nd. Small cystic formations occupying the true pelvis.

3rd. Medium sized tumours which are felt well above the pelvic brim, and whose summit may reach to about the level of the umbilicus.

It is to this last division that I wish particularly to refer, for my belief is that the detection of such a tumour in the abdomen is *prima facie* evidence of an inter-ligamentous cyst formation.

As regards diagnosis, to briefly run over the points that have assisted me in arriving at an opinion:—

History.—In a large proportion of these cases, the discovery of the existence of the tumour has been more or less accidental. An examination has been made in consequence of some secondary irritations, bowel or bladder possibly, or advice has been sought in consequence of sterility, dysmenorrhœa, or the like. The abdominal enlargement has not, as a rule, been observed, and advice is rarely sought on this account. Frequently there have been recurrent attacks of pelvic inflammation. It would be interesting to know how these stand as

regards cause and effect. Amongst married women there is often a history of complete or acquired sterility.

Where an opportunity occurs for watching these growths their increase is slow; it is often years before the enlargement will reach the level of the umbilicus. They rarely acquire the enormous dimensions of the ordinary form of ovarian cystoma. Patients, as a rule, are in fair health. The abdomen has commonly a good layer of fat. The patients have often acquired invalid habits without any very definite symptoms.

Physical examination.—It seems best to consider this under two headings, before and after incision of the abdomen. This may seem unnecessary, for as soon as the abdomen is opened one generally imagines the diagnosis at once cleared. In the condition we are considering this is far from the case; it is by no means so simple to “open the abdomen and see what’s the matter,” and unless very careful method is observed in the conduct of examination of cases such as these, mistakes will frequently occur even after free incisions.

Per abdomen.—Before exploratory incision, therefore, the first point to which I would attach importance is this, wherever a cystic tumour is found springing from the pelvis, with its summit from somewhere above the level of the symphysis up to the level of the umbilicus, the probabilities are in favour of such a tumour being *in* the layers of the broad ligament.

The outline of the growth is often ill defined; it does not lie immediately in contact with the abdominal wall. Intestines often intervene, and the percussion note is, consequently, uncertain. The sac does not, as a rule, feel tense, and lobulations can be rarely detected.

Per vagina.—The tumour bulges into the vagina, unlike the simple ovarian form; occasionally one lateral fornix is especially involved—sometimes it may spread posteriorly round the uterus, displacing that organ laterally or forwards. Lobulation can frequently be made out *per vaginam*, and, where the deep portion of the broad ligaments are involved, the cyst formation is closely connected with, or adherent to,

the uterus. The tumour is fixed in the pelvis and cannot be dislodged.

After the abdomen is opened the appearance of the cyst wall is the first guide, and in a doubtful or anxious case the relief felt, is great, at the first glimpse of the pearly white wall of the ovarian cyst.

Cyst formation in the broad ligament, may appear bluish or almost black when they have a thin wall distending an unaltered peritoneal covering. Sometimes, they have a fleshy appearance, causing a suspicion of fibroid, sometimes whitish, though never presenting the characteristic white of an ordinary ovarian—often a network of veins ramifies over its surface.

The next most important guide is the existence of a layer of movable peritoneum over the surface of the tumour. The ordinary ovarian has its dense fibrous covering but no distinct layer of peritoneum. In cysts of the broad ligament the peritoneal covering can be often made to glide over the sac beneath—sometimes can even be pinched up and away from the sac. Occasionally, the peritoneum is adherent and blended with cyst beneath, but in all cases presents a different appearance to that of the simple ovarian tumour. Then also the peritoneum over the sac can, by careful examination, be traced as continuous with the peritoneum of the parietes and viscera.

In the large majority of instances, the diagnosis of broad ligament cyst can be made without any examination of the pelvic cavity by the fingers. If the case is considered doubtful, and further pelvic exploration is required, I would venture to raise a protest against attempts to accomplish this by separating adhesions or tearing away structures, until a diagnosis has been arrived at, and a definite plan of procedure determined on.

Now, as to treatment; the first point upon which more information seems required is the natural history of these cases when left alone. Do they necessarily increase and give rise to symptoms? What proportion could manage to live on, suffering but little from the presence of a tumour not sufficiently large in itself to cause any serious symptoms? The

tendency, at present, seems to be to operate whenever a marked tumour formation is detected, irrespective altogether of the existence or non-existence of symptoms. On this point, the opinion of the Society will carry much weight, bearing also as it does upon the important question of the advisability of early operation in all forms of ovarian tumour.

In some cases, where the cystic condition is limited to the layers of the mesosalpinx, these growths can be separated and ligatured like an ordinary ovarian cyst. Where, however, the cyst formation spreads deeply between the layers of the broad ligament, it becomes a most difficult question to decide on the best method of proceeding, and I must confess that on several occasions where my patients have undergone a very severe operation for the removal of what was apparently a very simple growth, it seemed to me they had been submitted to a very unwarrantable risk. Could not some of these cases be cured by simple aspiration or puncture or injection, even after exploratory incision, and if so, which cases hold out the best prospect of success?

When a broad ligament cyst is monocular, sewing the cyst wall to the abdominal parietes and drainage may effect a cure, but this would only occur after suppuration had destroyed the lining wall of the cyst—a process which is prolonged, tedious and attended by many dangers.

When a cyst is multilocular, drainage would certainly not be indicated, for recurrence would be almost inevitable.

Vaginal drainage offers no better prospects.

The treatment that I have latterly adopted in these cases, after deciding the case is unsuitable for ligature and removal, is to first evacuate the cyst at its most prominent point, then to pinch up a small portion of the entire thickness of the cyst wall and its covering, and to snip out a circular piece about the size of a shilling. An examination of the part removed will often guide in the subsequent measures; if the inner layer strips readily there will be a good prospect of removing the whole cyst wall in the same manner, and this seems to be the most radical and satisfactory plan, viz., an enucleation

of the cyst from between the layers of the broad ligament. Some of these cases are extremely difficult to so treat, when the cysts are multilocular, and bulge, as they sometimes do, through the posterior layer of the broad ligament. This structure at the part is so thinned as to be almost necessarily torn through during attempt at stripping; sometimes the cyst wall, its coverings and adjoining viscera, are welded together by inflammatory products, and their removal is well nigh impossible. The best plan seems to steadily persist at attempts at enucleation, following on one particular route until it is absolutely impossible to proceed further; then to start in another and entirely different direction, and proceed with the shelling out; in this manner, by steady and persistent endeavours adopted on a methodical plan, entire enucleation will, in the large majority of cases, be accomplished. The whole cyst wall being removed, the bleeding is of course severe, but can be arrested by forceps and sponge pressure. The contents of the cysts being usually non-purulent, advantage may be taken of Trendelenburg's posture. This has in several difficult cases proved of invaluable assistance to me. It seems to me that a patient runs a considerably increased risk from attempts to complete difficult operations of this kind through a small abdominal incision. What harm can possibly ensue from a wound in such simple structures as the abdominal walls being extended an inch or two? When we are dealing with complicated conditions the more of our senses that can be utilised the better. Certainly, for my part, if my own viscera had unfortunately to be manipulated, I should prefer it being done by a surgeon who was in possession of, and knew how to employ, all his senses.

Presuming, then, in these cases, surgical measures have been decided on, there can be little difference as to the preliminary step being an exploratory incision; as to further treatment, different modes must suggest themselves. On one point, at any rate, I am satisfied, and that is what *not to do*. On the face of it, it may seem almost unnecessary to point

out that when these cyst formations sink deeply into the pelvis, dissecting out, in fact, the layers of the broad ligament, any attempt to remove them by groping in the dark, and manipulations from behind the posterior layers of the broad ligament, must be followed by disastrous consequences. Once it is decided we have to deal with a broad ligament cyst it appears to me that attempts to rip and tear away such cysts from Douglas's pouch can only be undertaken by one who ignores the most elementary facts in the anatomy of the female pelvis.

If a broad ligament cyst is *unrecognised* we can understand attempts directed to tear it from the pelvis as if dealing with an ovarian tumour with extensive pelvic adhesions. Where, however, the condition is *recognised*, for my part, at any rate, I fail to follow the *rationale* of attempts to remove it from behind through the broad ligament, or to understand why we should hear surprise expressed at the density of the adhesions.

I fear I have detained you with many details with which you are all well cognisant. My apology is that although I claim to have kept myself fairly in touch with gynæcological literature, the importance of the conditions referred to, has only been appreciated by me after an experience at times dearly bought. My desire in preparing this paper has been to put others on their guard.

Dr. INGLIS PARSONS said that Dr. Keith had recommended tapping for simple cysts of the broad ligament, and had found that they did not refill. In one of his own cases—a large parovarian cyst adherent to the pelvis—he had emptied the cyst and then sewed the opening to the abdominal wall, and swabbed the inside with an iodine solution, and put in a drainage tube. Lymph was poured out, the sac collapsed, and the patient made a perfect recovery without any suppuration or trouble. It was a mistake to think that suppuration must occur in a case so treated. If antiseptic precautions were followed, adhesive inflammation occurred without suppu-

ration. It was surely better to do this than attempt removal, with a likely prospect of a fatal result.

Dr. MAUNSELL and Dr. ROUTH briefly commented on the points raised in the paper, and Dr. BATCHELOR replied.

The Society then adjourned.

THE BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, DECEMBER 8, 1892.

A. N. EDIS, M.D., F.R.C.P., TREASURER, IN THE CHAIR.

PRESENT : 15 Fellows.

The following were proposed for election : Drs. A. E. A. Lathbury and R. H. Barber.

Dr. A. FAUSSETT was elected a Fellow of the Society.

Mr. F. BOWREMAN JESSETT showed a curette he had had made by Messrs. Maw, Son, and Thompson for the purpose of curetting and dredging carcinomatous growths from the vagina and uterus. The principle of the instrument was a combination of Bell's dredging curette and Otis's urethral dilator. The instrument is furnished with six cutting blades two and a-half inches long, fixed at the extreme end of a long staff, and lying parallel to the staff. These blades are made of highly tempered steel, and by means of a screw at the proximal end these blades can be made to bulge out so as to cover an area from half-an-inch to two inches in circumference. The curette is used by simple rotation.

Mr. O'CALLAGHAN showed specimens of fibro-myoma and ovarian cyst.

Dr. BANTOCK said that the specimen was a very characteristic example of cystiform degeneration of a fibroid tumour of the uterus. It presented the irregular, rough interior surface of which he had frequently spoken. There was no secreting or lining membrane, as found in all true cysts, nor were the contents the result of secretion, but the fluid and *débris* due to the breaking down of tissue. The specimen illustrated a more advanced stage of that degenerative change of which he had shown examples of the earlier stages at a recent meeting. Thus there was first a state of oedema,

then a state of hygroma, and, finally, the formation of a cavity into which the fluid from the surrounding tissues collected by drainage. It was not a suppurative process—for there was nothing in the contents resembling pus—but it was a true necrotic process.

With regard to the second specimen, Dr. Bantock pointed out that the cyst wall presented all the characters of a true ovarian cyst, and this was confirmed by the relations of the Fallopian tube to the cyst. There were appearances which to the naked eye indicated Graafian follicles near what apparently was the base of the tumour. The presence of papilloma in an ovarian cyst was not very uncommon, but this form of degeneration was usually associated with a large amount of fluid. He had not seen a case in which the papilloma so completely filled the cavity as in this instance. In the smaller of the two cysts which formed the tumour, and which had been laid open, the enclosed mass presented that peculiar appearance from which this disease has obtained the name of “cauliflower” growth.

Dr. EDIS having commented on the paper, Dr. HEYWOOD SMITH hoped that Mr. O’Callaghan would answer the President’s question more definitely as to the nature of the contents of the tumour, as to whether they consisted of, as Dr. Bantock had suggested, *débris* mixed with water derived from the fibroid basis, or of blood-stained fluid, or whether there was any pus? He would also like to know how he had secured the pedicle?

Mr. O’CALLAGHAN briefly replied upon the points which had been raised.

The following paper was then read :—

Twenty-five Cases of Supra-Vaginal Amputation of the Cervix Uteri for Carcinoma. By FRED. BOWREMAN JESSETT, F.R.C.S.Eng., Surgeon to the Cancer Hospital, Brompton.

In bringing these cases before the Society I wish it to be understood that I do so for the purpose of giving my support to the operation of supra-vaginal amputation of the neck of

the uterus in those cases *only* in which the cancerous growth is limited to the external os or to the cervical canal. In those cases in which the vaginal wall or the body of the uterus is involved, the operation, in my opinion, is contra-indicated.

The cases I have selected are those on whom I have operated during the years 1889, 1890 and 1891. With the exception of one or two instances, the specimens have been microscopically examined and pronounced to be carcinoma; those cases which were of a doubtful character certainly presented macroscopically all the appearance of malignancy.

The following are brief notes of the cases, and, as you will see by the table before you, I have tabulated them in chronological order.

In the year 1889 I operated upon four cases.

Case I.—Mrs. B—, aged 60; large family. Duration of the disease, several months. The os was deeply ulcerated and hardened, the cervix thickened and somewhat nodular. Uterus freely movable. Vagina free from disease. On May 1st, 1889, I performed supra-vaginal amputation of the cervix, at the same time cutting out a large conical piece above the internal os, the apex of the cone extending nearly to the fundus. The patient made an excellent recovery, and had a good sound stump. She kept free from the disease until September, 1891, when recurrence took place, and the patient declined further operative interference.

Case II.—Mrs. —, aged 61; married; several children. The external os is ulcerated, the ulceration extending into the cervical canal. Bleeds freely; much induration. On July 16th, 1889, I performed supra-vaginal amputation of the cervix. The patient made an excellent recovery, and remained free from disease until her death, which took place some two years afterwards from bronchitis. By the courtesy of Dr. McCaskie I was enabled to obtain the uterus, which I have here, and, as you will see, there is no trace of recurrence.

Case III.—Mrs. W—, aged 42; married; four children; duration of the disease some six months. Os presents a ragged, ulcerated surface; the cervix is hard and thickened.

Uterus movable, vagina free. On September 22nd, 1889, I performed supra-vaginal amputation of the os and cervix, curetting the endometrium, which was left. Patient made an excellent recovery, and is now free from any recurrence.

Case IV.—Mrs. H——, aged 41; married; two children; duration of disease twelve months. Posterior lip is thickened and rough, deep ulceration extending into cervix; uterus movable, vagina free. Supra-vaginal amputation performed December 2nd, 1889. There was some free hæmorrhage, which was arrested by plugging. Wound healed well, and the patient has had no recurrence until now. Suffered for some year or eighteen months with much pain and distress at the ordinary menstrual periods.

During 1890 I operated on eleven cases.

Case V.—Mrs. W——, aged 54; married; two children; duration of disease said to be only five months. Os and cervix indurated and somewhat ulcerated; uterus enlarged, and only slightly movable. Supra-vaginal amputation performed February 2nd, 1890. The stump healed slowly, and the patient made a tedious convalescence. There was recurrence of the disease in three months.

Case VI.—Mrs. H——, aged 29; four children. Has had an offensive discharge for six months. The cervix is hard and thickened and fissured; the os ulcerated, reddened and slightly irregular. Vagina free. Supra-vaginal amputation performed March 1st, 1890. Patient made a good recovery, and is free from any recurrence. This was a doubtful case of carcinoma, although it had all the general appearance of cancer.

Case VII.—Mrs. C——, aged 54; widow; two children. Sister died of cancer of the uterus. She had noticed a discharge for eight months. Cervix enlarged and indurated. Vaginal surface not ulcerated. Offensive discharge. Uterus movable. Has had a good deal of hæmorrhage. March 25, 1890, supra-vaginal amputation performed; rather severe hæmorrhage. Patient made a good recovery, but had recurrence of the disease in a few months.

Case VIII.—Mrs. S——, aged 45; three children; duration ten months. Aunt died of cancer. Cervix enlarged, indurated, and ulcerated. Several isolated nodules on cervix. Uterus movable. April 20, 1890, supra-vaginal amputation. Patient made an excellent recovery, and has had no recurrence.

Case IX.—Mrs. B——, aged 35; married; duration eight months. Cauliflower growth from cervix. Uterus movable; vagina free. Supra-vaginal amputation, April 14, 1890. Patient progressed favourably for the first three days after the operation, when she had a rigor, and temperature rose to 103.8° accompanied with vomiting. Some pus was let out, and a drainage tube inserted. She had several more rigors, accompanied with high temperature, and died. *Post-mortem* revealed extensive pelvic cellulitis.

Case X.—Mrs. H——, aged 42; married; six children; duration of disease, ten months. An irregular ulcerated growth is seen springing from the cervix, more especially from the posterior lip. Uterus mobile; vagina free. Supra-vaginal amputation on May 20, 1890. In this case, the disease extended higher than was anticipated. The endometrium was curetted, and the cavity of the uterus packed with strips of gauze soaked in a saturated solution of chromic acid. There was some sharp hæmorrhage on the slough—the result of the chromic acid—separating. The patient, however, made a very good recovery, but the disease recurred in a few months.

Case XI.—Mrs. R——, aged 60; two children; duration of disease four months. Father died of cancer. Large cauliflower growth springing from cervix; bleeds freely when touched; uterus freely movable. Supra-vaginal amputation, August 9, 1890. Free hæmorrhage; vagina plugged with gauze. Patient made a good recovery. Lost sight of. When last seen, some months after operation, there was no recurrence.

Case XII.—Mrs. G——, aged 39; married; four children; duration of disease twelve months. Cervix ulcerated and

ragged; uterus somewhat fixed; offensive, blood-stained discharge. On July 26, supra-vaginal amputation performed. There was great difficulty in getting beyond the disease, and although the patient made a fairly good recovery, the disease recurred directly.

Case XIII.—Mrs. P——, aged 43; married; eleven children; duration of disease nine months. Irregular growth of considerable size springing from cervix. Left side of os more especially affected. Free hæmorrhage at times. Supra-vaginal amputation, August 12th, 1890. Patient made a good recovery, and there was no recurrence when last seen.

Case XIV.—Mrs. O'C——, aged 54; one child; duration of disease six months. Extensive ulceration of os; cervix hard and indurated. Uterus movable, vagina free. Supra-vaginal amputation, November 7th, 1890. Sharp hæmorrhage; forceps left on. Patient made a good recovery. No signs of recurrence at present time.

Case XV.—Mrs. R——, aged 57; married; one child; duration of disease twelve months. Well-defined roughened irregular growth from cervix, accompanied with profuse, very offensive discharge. Uterus freely movable. Vagina free from disease. Supra-vaginal amputation performed December 5th, 1890. Patient made a good recovery, and has had no recurrence.

In the year 1891 I performed ten operations.

Case XVI.—Mrs. H——, aged 51; widow; duration of disease twelve months. A hard, irregular mass springing from the os. Uterus freely movable; vagina free. Supra-vaginal amputation, January 30th, 1891. Made good convalescence. No recurrence hitherto.

Case XVII.—Mrs. N——, aged 45; duration of disease eight months. An ulcerating mass protruding from cervix; uterus freely movable; vagina not implicated. Supra-vaginal operation February 16th, 1891. Patient made a good recovery, and has had no recurrence hitherto.

Case XVIII.—Mrs. H——, aged 47; three children; duration of disease six months. Cervix infiltrated with

growth ; vagina free ; uterus freely movable. Supra-vaginal amputation March 26th, 1892. Stump cicatrized well. No recurrence hitherto.

Case XIX.—Mrs. S——, aged 45 ; married ; duration of disease six months. Large cauliflower growth extending halfway down the vagina ; uterus mobile ; slight infiltration of vaginal walls posteriorly. May 17th, 1891, the disease was cut away with scissors, and a deep cone-shaped piece excised from the uterus with scissors. Patient, who was in a weak condition, gradually became weaker, and died on June 3rd, 1891. Unfit case for this operation.

Case XX.—Mrs. S——, aged 44 ; married ; three children ; duration of disease seven months. Os uteri deeply ulcerated, and cervix considerably thickened and hard. Supra-vaginal operation, May 29th, 1891. Made good recovery. No recurrence hitherto.

Case XXI.—Mrs. B——, aged 45 ; married ; no children ; duration of disease twelve months. Large ulcerated mass protruding from cervix, implicating vaginal walls. Disease removed with scissors, July 12th, 1891, and a deep conical-shaped piece cut out of the uterus. Patient made a good recovery, but the disease recurred three months later.

Case XXII.—Mrs. M——, aged 45 ; married ; seven children ; two miscarriages ; duration of disease ten months. Large, hard ulcerated mass implicating both lips of os. Uterus freely movable ; vaginal walls free. Supra-vaginal amputation, August 4th, 1891. Patient made a good recovery, and has had no signs of recurrence.

Case XXIII.—Mrs. P——, aged 51 ; married ; five children ; duration of disease five months. Deeply ulcerated condition of os ; cervix infiltrated and hard ; uterus movable ; vagina free. Supra-vaginal operation, December 5th, 1891. Patient made a good recovery, and is free from recurrence at present.

Case XXIV.—Mrs. W——, aged 40 ; eight children and two miscarriages ; duration of disease said to be two years. Small eroded surface on posterior lip of os, with great

thickening and induration of the cervix. This patient was treated for some time without any improvement. Supra-vaginal amputation, December 18th, 1891. The disease was found to extend up the cervical canal, and a large conical piece of the uterus was removed extending well above the internal os. Patient made an excellent recovery, and is quite free from recurrence at present.

Case XXV.—Mrs. S——, aged 51; married; six children; duration of disease, three months. A deeply ulcerated patch on posterior lip of os, the edges of which were irregular and everted; bleeds readily on examination. Supra-vaginal operation, December 19, 1891. Patient made a good recovery and at present is free from recurrence.

Such is the brief histories of these cases, of which fifteen recovered, and have had no signs of recurrence at the present. The time which has elapsed since the operation in these cases varies from one to three years. One case recovered from the operation, and remained free from recurrence for over two years, when the disease reappeared. In five cases, recurrence took place within a year of the operation. Two cases were lost sight of, but were free from recurrence when last seen, some time after the operation. Two cases died—one from pelvic cellulitis and another from exhaustion. This latter case should hardly have been included in the series, as the disease was far too extensive to allow of anything but a palliative operation.

From these cases, I think a valuable lesson may be learned, and I purpose to make a few remarks respecting Cases V., VII., IX., X., XII., XIX. and XXI. In all these cases, recurrence took place within a few months after the operation, or the patients died. It may be taken, therefore, that they were not benefited in any way by the operation. It may be assumed, therefore, that they were cases unsuitable for this form of operation.

In Case V. we find the disease is said only to have existed for five months, and digital examination merely discovered some induration of the os and cervix, and a slightly enlarged

uterus, not very mobile. The speculum revealed some superficial ulceration. Here is a case in which, if the true significance of the enlarged and slightly fixed uterus had been fully appreciated, such an operation as partial removal of the viscus would not have been attempted, as it is obvious from the very speedy recurrence of the disease that although the cervix was thought only to be implicated, yet in all probability the disease commenced in the endometrium. In such a case the only operation that was at all likely to be of permanent service would have been total extirpation of the uterus, and even in such an operation some difficulty would have been encountered owing to the fixation.

Case VII.—Had noticed an offensive discharge for eight months. Here there was no ulceration of the os, but the cervix was enlarged and indurated. The uterus was freely movable. In this case there can be but little doubt but that the disease commenced in the cervical canal, and instead of extending downwards towards the os, as usually is the case, it passed upwards to the mucous membrane lining the body of the uterus. In cutting out the conical piece, while believing the incision was carried well beyond the disease, yet there must have been some foci of malignant growth extending either deeply into the muscular tissues or into the mucous surface, which was not removed. In this case I think vaginal hysterectomy would have been the better operation, or the cavity of the uterus should have been thoroughly curetted and packed with chloride of zinc wool.

Case IX. had a large cauliflower growth springing from the os. The uterus was freely movable, and this, in my opinion, was a suitable case for supra-vaginal amputation. Probably, however, from the long contact with this foul growth, the mucous membrane of the vagina became impregnated with the septic discharge, and notwithstanding the most scrupulous care and use of antiseptic applications the wound caused by the operation became infected, and pelvic cellulitis followed. In such cases, perhaps, it would have been wiser to have introduced a glass drainage tube, and packed the vagina with some antiseptic gauze.

Case X. had all the appearance of being a favourable case for the high operation; here, however, as in Case VII., the disease had evidently extended more deeply than was anticipated. No doubt total extirpation would have been a preferable operation in this case.

Case XII.—Here again the uterus was somewhat fixed, and undoubtedly these cases are unsuitable for operation.

In Case XIX. the vagina was involved to a slight extent, and a large cauliflower growth occupied the vagina. The patient was very reduced by septic absorption and loss of blood during the operation, which was undertaken purely as a palliative measure to relieve the poor woman of a putrid badly smelling mass. This case can hardly be included as one in which the high operation only had been performed.

Case XXI., owing to the extent of the disease, would have been better treated by complete extirpation; permission, however, for doing this had not been obtained, so that the course which in my opinion would give her the next best chance of getting rid of the disease was adopted.

Remarks.—In the first place, I think it will be well to define my meaning of the term supra-vaginal amputation as applied in this paper; it is not the mere amputation of the cervix, but the removal of the cervix with a large cone-shaped piece above from the body of the uterus.

I am quite in accord with Dr. John Williams, Schroeder, and Hoffmeier, whose statistics go conclusively, I think, to show that where carcinoma of the uterus is seen early, and the disease is limited to the vaginal portion of the organ, supra-vaginal amputation is all that is necessary, and it is useless to put patients to the extra risk of total extirpation of the uterus. Gusserow gives the mortality after supra-vaginal amputation when performed by the knife at 9.09 per cent., and when by the galvanic cautery at 7.75 per cent., while Post, in the *American Journal of Obstetrics*, November, 1887, in 700 cases of vaginal hysterectomy he had collected, asserts that the mortality after this operation is 24 per cent. Since these statistics were collected, no doubt the methods adopted

for the removal of the uterus *per vaginam* are much improved, but even now Martin, of Berlin, gives his mortality at 16.6 per cent., while, however, Leopold and Scengen acknowledge to a mortality of only 6.2 and 8.3 per cent. respectively. There can be no doubt, I think, that the deaths after supra-vaginal amputation are considerably less than after vaginal hysterectomy, and in suitable cases I think I have shown that the results obtained are such as to warrant us in advising the former operation in preference to total extirpation in suitable cases.

In performing these operations certain points must be carefully studied, as the after results are considerably influenced by attention to small details.

First, the patient must be carefully prepared. The vagina, for some days before the operation, should be kept thoroughly syringed out with some antiseptic solution—perchloride of mercury, iodine, or carbolic acid for choice. A tampon soaked in perchloride or carbolic solution should be introduced into the vagina on the morning of operation. The bowels should be thoroughly emptied, and a large enema administered a couple of hours before the patient is placed on the table, so as to thoroughly wash out the rectum and colon. During the operation irrigation of the parts should be constantly applied.

When operating, the uterus must be pulled well down by means of vulsellum forceps, and the mucous membrane divided with scissors, as far away from the disease as possible—usually, I think, the line where the mucous membrane of the vaginal wall ceases, and it becomes reflected over the neck of the uterus is the best. The scissors which, by-the-by, I always use in this operation, should be strong, blunt-pointed, and bent on the flat. Their points after the mucous membrane is divided should be kept, when cutting through the muscular tissues of the uterus, as near to the outer border as possible, and the snips should be short and carried evenly round and round the part to be excised. In this way there is no difficulty in arriving at a level with the internal os; here is the crucial point,

as if it is found necessary to go beyond this, great care must be exercised, or the points of the scissors may readily cut through into the peritoneum. Strong traction should be made upon the neck of the uterus with the vulsellum forceps, and it is often well to introduce a sound into the uterine cavity to serve as a guide.

Any bleeding points should be caught and tied. If, as is occasionally the case, the hæmorrhage is profuse, the uterine arteries must be secured. In some cases when the hæmorrhage proceeds from points situated in the uterine walls, it will be found most difficult to apply a ligature. In such a case, one of two plans must be adopted: one, to leave the forceps hanging for a period of twenty-four hours; the other, to pack the wound with gauze soaked in tincture of matico.

In cases of women who have not arrived at the climacteric period, and in whom the operation has not extended to the fundus of the uterus, the endometrium being left, it is always wise to introduce a vulcanite stem into the uterine cavity, and to have this removed and replaced each day, thus preventing the wound from healing over and closing the outlet of the uterus, as in many cases would be the case if this precaution is not taken. By not attending to this I have seen very great discomfort, and, indeed, risk to life occur.

After the operation is completed and all bleeding arrested, I advise the passing of a stout, long suture through the anterior and posterior lips of the opening made into the uterus. This has been on more than one occasion the source of great help in those cases in which secondary hæmorrhage has taken place. In such cases if this precaution is not adopted it is often most difficult to get at the stump to examine from whence the bleeding proceeds, as in all these cases the fundus of the uterus recedes considerably, and it is a great comfort to be able to examine it merely by means of traction on the suture which is passed through the stump, instead of having to grope about through a speculum with vulsellum forceps.

In the after treatment, I consider that the parts should be thoroughly syringed out night and morning through a full-

sized Ferguson's speculum. Simple irrigation without the use of a speculum is not sufficient, as often there may be clots collected above the opening in the roof of the vagina, and without these are thoroughly removed and the parts cleansed, septic mischief is very likely to occur and disaster follow.

A few words as to the class of cases in which supra-vaginal amputation of the cervix is applicable. They may be summarised in my opinion by saying that in carcinoma of the uterus in which the disease is limited to the vaginal portion of the viscus, and the fundus to all appearance is free, the uterus being movable and the vaginal walls not implicated, such a case is one suitable for operation, and by adopting this measure, good results may be anticipated. I mean, of course, the operation being carried out thoroughly as already described.

In those cases in which the fundus is implicated, but the uterus is freely movable, and the vagina free, I agree with Martin of Berlin and Skene of Brooklyn. The former surgeon says, "I recommend the vaginal extirpation of the uterus as the means which we ought to apply in cases of cancerous diseases of the uterus as long as the disease is limited to the uterus itself."

Dr. Skene, speaking of vaginal hysterectomy, says : "The operation in my opinion is indicated when the disease is near to, or after, the menopause ; when it begins in the endometrium, more especially in the body of the uterus ; when the diagnosis being made, and the vaginal walls and Fallopian tubes are not involved ; and before necrosis has begun in any part of the abnormal tissue."

The cases in which failure has occurred in my series, I have presented to you. I still think, that in those cases in which neither supra-vaginal amputation nor vaginal hysterectomy is applicable, there is another course open, but of this I hope on a future occasion to give you my experience. For the present, I may say that this paper is based purely on my own practice and upon those cases which have come under my notice, and I trust that should you think well of the treat-

TABLE OF CASES OF SUPRA-VAGINAL AMPUTATION OF THE CERVIX UTERI.

1889.				
No.	Age.	Date.	Result.	Remarks.
1	60	May 1	Success	Kept well until September, 1891. Then disease reappeared [recurrence
2	61	July 16	"	Died of bronchitis two years after. No
3	42	Sept. 22	"	No recurrence, Nov., 1892
4	41	Dec. 21	"	No recurrence, Nov., 1892. Suffered from pain at menstrual periods
1890.				
No.	Age.	Date.	Result.	Remarks.
5	54	Feb. 28	Recovered	Recurrence in three months
6	29	Mar. 19	Success	Well, Nov., 1892. Doubtful carcinoma
7	54	" 25	"	Smart hæmorrhage arrested by plugging. Recurrence
8	48	Apr. 20	"	No recurrence when last seen
9	35	" 14	Died	Pelvic cellulitis
10	42	May 20	Success	Recurrence one year afterwards
11	60	Aug. 9	"	No recurrence when last seen. Has been lost sight of
12	39	July 26	Recovered	Immediate recurrence. Unsuitable case
13	43	Aug. 12	Success	No recurrence when last seen
14	54	Nov. 7	"	Well, Nov., 1892
15	57	Dec. 5	"	" " "
1891.				
No.	Age.	Date.	Result.	Remarks.
16	50	Jan. 30	Success	No recurrence when last seen
17	45	Feb. 16	"	Well, Nov., 1892
18	47	Mar. 26	"	" " "
19	45	May 17	Died	Vaginal walls implicated. Unsuitable case
20	44	" 29	Success	Well, Nov., 1892
21	45	July 12	Recovered	Recurred, Oct., 1891
22	45	Nov. 7	Success	Well, Nov., 1892
23	51	Dec. 5	"	" " "
24	40	" 18	"	" " "
25	51	" 19	"	" " "

SYNOPSIS.

- 15 Recovered. No recurrence up to date.
 1 Recovered. Disease recurred in two years.
 2 Recovered. No recurrence when last seen.
 5 Recovered. Disease recurred within a year.
 2 Died. 1 from Pelvis cellulitis; 1 from disease.

ment, you will give the operation a fair and impartial trial, as I feel that in our days some surgeons are rather prone to adopt operations which place their patients in great peril, when perhaps a less severe measure might prove equally efficacious.

Dr. EDIS thought the profession would be indebted to Mr. Jessett for the information he had laid before the Society that evening. The success of the operation depended entirely upon its being performed in the very early stage of cancer. Where the vagina or the surrounding tissues were implicated operative interference was not indicated, except as a palliative measure to relieve symptoms, such as hæmorrhage or exhaustive discharges.

The time since many of the operations had been performed in Mr. Jessett's cases was too short at present to judge of the permanent effects, but the primary success was certainly encouraging.

The advantage of this method of operation over complete extirpation of the uterus, was that the shock was much less severe, the risk of uncontrollable hæmorrhage much less, and in properly selected cases the prospects of permanent relief were equally satisfactory.

Where the uterus was already fixed in the pelvis by surrounding deposit the operation was contra-indicated, although even in these cases alleviation of pain, hæmorrhage and other distressing symptoms was usually obtained. Dr. Edis had resorted to this method repeatedly, and had obtained a fair measure of success, recurrences of the disease being few. Early diagnosis was a very important factor, and too much stress could not be made upon the necessity of examining at once all cases of menorrhagia, attended by pain, in patients between 40 and 50 years of age, or at any time where the least suspicion of malignancy existed. The risk of secondary hæmorrhage occurring about the end of a week or ten days after the operation should not be overlooked; absolute rest in bed for at least a fortnight should always be insisted upon.

Dr. ROUTH, after eulogising the very practical character

of Mr. Jessett's paper, said in one respect he could not but differ from remarks made by Dr. Edis on that paper. It might be true that as far as *cure* was concerned, many cases were hopeless; still the misery, the stench produced by cancer of the womb, the great pain endured—which made such patients a nuisance to themselves and others, and life a burden—could be temporarily allayed. The parts would heal after operation, and most of the above symptoms would be temporarily arrested, and for three, four, or even more months a state of comparative comfort brought about.

Secondly, before promising anything like permanent relief, or proceeding to operation in that expectation, it was essential not only to examine very accurately the contiguous parts, but those at a distance, especially the glands in the vault of the pelvis and its base, to see if any of these were involved. Not only by the *vagina*, but *per rectum*. He had often been able to correct a conclusion come to by such an investigation, which precluded all hope of ultimate recovery.

Thirdly, there could be no doubt that the plan carried out by Mr. Jessett had been very successful and was well worthy of imitation. It was a plan which had often been carried out at the Samaritan Free Hospital during his term of office, but he (Dr. Routh) had found that in many of these cases after operation the red hot iron applied to the wedge-shaped stump was very good practice. Not only did it extend the destruction of the cancer beyond the reach of the knife, but it arrested all chance of secondary hæmorrhage, and when the slough came away there was a better chance of non-recurrence. But in these cases, beyond all things, the dressings should be antiseptic. Mere warm water was insufficient. It would not destroy smell, or hasten the removal of the slough, which putrefied in the vagina, and might poison the patient, not coming away perhaps for a week or even longer. In this case he dressed the slough with cotton dipped in the *acid glycerol of pepsin*. This destroyed all odour, rapidly dissolved the slough, which sometimes came away in three days or even less, sometimes disappearing under solution.

Another way in which the cancerous mass could be destroyed, either without, or after operation with, the knife, was by bromine. It was a very effective and safe way, but it should be carefully used. (1) The bromine should be prepared a very short time before the operation, otherwise it was liable to lose its strength by conversion into hydro-bromic acid; (2) when prepared, the bromine should be applied in the proportion of one drop to five of spirits of wine very carefully, and held at a distance from the operator's eyes and person, lest an explosion should occur. (3) The shape of the cervix should be taken in gutta-percha, and then this should be lined with cotton wool, and this last moistened with the solution, and applied to the cervix, its surroundings being well guarded by cotton dipped in a persaturated solution of carbonate of soda. Any excess of bromine was thus converted into bromide of sodium, and the vagina escaped scot free, otherwise a hole might be made in it. The bromine was very painful; it generally did its work in two hours, but for safety it was kept in four hours, and then the whole appliance removed, and the vagina syringed with carbonate of soda solution. The slough formed by the bromine was much deeper than that of the actual cautery, being from one-fourth to three-fourths of an inch thick. But it needed also as a *sine quâ non*, the gastric juice solution to hasten its disappearance and to destroy all smell. In some cases, the bromine might be injected into the diseased parts, but this required great care. The pain could always be relieved by subcutaneous injection of morphia.

In those instances where there was a fear that the disease might extend to the internal os or a little beyond, an intra-uterine bromine plug should be inserted. He usually employed a sea tangle covered by cotton wool, and impregnated by the bromine, guarding the projecting end and the cervix with the cotton impregnated with a solution of soda, as before stated. In this way we could stop the progress upwards of the disease very frequently.

Dr. PARSONS commented briefly upon the paper, and

advocated the treatment of malignant growths of the cervix by passing an electrical current through them.

Dr. BEDFORD FENWICK recalled the facts of a case, unique of its kind, which he had some years ago brought before the Society—a woman who, some months after supra-vaginal amputation of the cervix for malignant disease, consulted him for pregnancy associated with the most violent and almost constant vomiting. Examination showed that no opening even of the most minute kind could be detected into the uterus, and the vaginal walls, tightly stretched over the stump of the cervix, seemed tense to the point of rupture during a fit of retching. Under chloroform, no opening could be found in the cervical stump; finally Porro's operation had to be performed at about the fifth month for the uncontrollable vomiting. In reference to the good results from electrical treatment described by the previous speaker, Dr. Fenwick expressed the opinion that Dr. Parsons owed it to himself and his profession to put on record the cases to which he had referred. He could not understand the *rationale* of the treatment, but if Dr. Parsons had discovered any means whereby these painful cases could be cured, or even relieved, the sooner the facts were made known, the better would the whole profession be pleased.

Dr. HEYWOOD SMITH said that the operation under consideration seemed from what had been said to be an alternative operation to vaginal hysterectomy, but he considered that there were many cases where the latter would not be justifiable, but which might be benefited by the former. And there he must agree with Dr. Routh in saying that in many cases it was possible to relieve pain, and even to prolong life, by supra-vaginal amputation. He recently had a case under his care which had been seen by a specialist in the spring of 1891, and this doctor had said that nothing could be done, and that the patient had only three weeks to live. After the three weeks were over she sent for him (Dr. Smith) and asked, as she was not dead, whether he could do anything for her.

He performed the operation under discussion, and she had only died about a month ago. He considered that in cutting out the cervix widely there was likely to be smart hæmorrhage from the branches of the uterine artery; this greatly interfered with the operation, as it was impossible to see how one was getting on, and it was difficult to use the cautery and go on cutting. He also thought it would be difficult to pass a thread through the anterior lip, as there would be but little tissue left to hold. With regard to the other methods besides the knife and scissors, by which to scoop out the cervix, he considered the actual cautery not good, as it charred to a certain depth beyond which one could not burn. Then the cervix might be hollowed out very efficiently and rapidly with *potassa fusa*, but the use of that caustic was rather risky as it was so deliquescent, and vinegar, or some acid, had to be used to neutralise it as it ran down towards the vagina. The best method, he considered, was that proposed by Dr. Marion Sims, in which, after all the diseased part had been cut away, as far as could be ascertained by the touch, the cavity was to be packed tightly with cotton wool wrung out of a saturated solution of chloride of zinc quite up to the external os, and the vagina then plugged with cotton plugs soaked in a solution of carbonate of soda. The plugs were removed the next day, and the chloride of zinc plug left in for four days; this requires a sort of corkscrew to remove it. The resulting slough came away usually in one piece about a quarter of an inch or more in thickness. He considered that this operation was applicable in many cases where vaginal hysterectomy would not be justifiable.

Dr. O'CALLAGHAN briefly commented on the paper.

Dr. BANTOCK said that he always treated with the greatest respect whatever came from Mr. Jessett's pen, and that he usually found himself in cordial agreement with him; but on this occasion he was bound to say that he had not been influenced by his arguments so far as to accept his conclusions. Mr. Jessett had admitted that in several of the cases he had related he ought to have performed the more complete opera-

tion of total extirpation—that they were unsuitable for the operation in question ; but he (Dr. Bantock) failed to see in what respect the one operation could be expected to yield better results than the other. If it were true—as Dr. Parsons had said, and his own experience confirmed it—that when the disease recurred it made its appearance in the cicatrix or the neighbouring tissues, then he did not see what difference it would make whether the whole uterus was removed or a part of it left—as regards recurrence. With respect to the operation itself, he had been under the impression that it was advocated as a wiser and therefore safer operation, because it left the peritoneum uninjured, but Mr. Jessett's admission that Douglas's pouch had been frequently opened in his hands placed the two operations on the same footing, practically, and for his part he would prefer to remove the whole organ, as ensuring an avoidance of some of the unpleasant occurrences that had been referred to, such as secondary hæmorrhage, occlusion of the uterine canal, with retention of the menstrual secretion, severe dysmenorrhœa from stenosis, &c. He did not think that we should be deterred from surgical interference in some of these cases on the ground that we could not expect a radical cure. Our object should be to relieve the sufferings of the patient as much as possible, and if by performing a minor or major operation we could ensure relief for a year, or more, or less, it was clearly our duty to give the patient the chance of that relief. As a rule, however, that could only be done by removing the whole of the disease as far as the naked eye appearance helped to guide us.

The occurrence of secondary hæmorrhage in the operation in question was a very serious matter, and was more difficult to guard against than in the more complete operation. There should be no insuperable difficulty in controlling primary hæmorrhage, for we had several resources at command, especially if the peritoneum were not opened. But he could not agree with the President as to the facility with which the uterine artery could be secured. It was easy to talk of using a sharp-pointed curved needle, but it was much more difficult to do it effectually.

Mr. F. BOWREMAN JESSETT, in reply, thanked the Fellows of the Society for their friendly criticisms on his paper. He could not altogether agree with Dr. Edis in respect to leaving cases alone, in which the operation of supra-vaginal amputation or complete extirpation were not applicable, as he was quite sure he had seen life considerably prolonged, and the last days of patients made much more comfortable by freely scraping away the disease, and in that way removing a quantity of necrosed and diseased tissue, afterwards plugging with cotton wool soaked in a saturated solution of chloride of zinc. By this means great relief from suffering was afforded. Dr. Routh had referred to the difficulty of removing the portion of the uterus above the internal os. While admitting, as he had pointed out in his paper, that this was the most delicate part of the operation, Mr. Jessett said he rarely had difficulty in cutting out the whole of the inner portion of the uterus quite to the fundus. Mr. Jessett had on two occasions applied bromine to a carcinomatous uterus, but the effects, as Dr. Routh had pointed out, were so startling he had been afraid to use it again. Dr. Inglis Parsons asked if it had been noticed in what tissue the recurrence occurred. This was rather difficult to say for certain, but it certainly appeared to Mr. Jessett that it occurred around the stump. With respect to the electrical treatment, he (Mr. Jessett) had tried it on a few occasions, but possibly he did not apply it in the correct manner. The result obtained by him was that of a cautery action, the eschar coming away much in the same manner as any other ordinary eschar; but he was not satisfied with the result, and preferred, when possible, to remove the disease by scissors as described. Dr. Heywood Smith had gone into the treatment of carcinoma of the uterus by curetting and packing the cavity with chloride of zinc wool. He (Mr. Jessett) quite agreed with this form of treatment in cases where neither supra-vaginal amputation nor vaginal hysterectomy were indicated, and he had to thank Dr. Heywood Smith for drawing his attention to it in the first place, for he had used it in a few instances with very satisfactory

results. This treatment of carcinoma was, however, rather beyond the province of the paper. Dr. Bantock said in his opinion cases suitable for supra-vaginal operation were those which were suitable for total extirpation. This was the very point that was intended to be conveyed by the paper, Mr. Jessett wishing it to be understood that he was opposed in these early cases to the major operation when equally good results may be obtained by an operation, the risk to the patient of which was very small. As regards opening Douglas's pouch, Mr. Jessett frequently did this, but it caused him no uneasiness, as he had never had any trouble from it. Dr. Callaghan inquired as to the *modus operandi*; this would be found fully described in the paper.

The Society then adjourned.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JANUARY 12, 1893.

HEYWOOD SMITH, M.D., VICE-PRESIDENT, IN THE CHAIR.

PRESENT: 16 Fellows and Visitors.

The one hundred and thirtieth meeting of the Society was held at 20, Hanover Square, on January 12th, 1893.

The Minutes of the last meeting having been read and confirmed, the *Annual Meeting* was held.

The following were proposed for election:—

Professor Küfferath, of Brussels, president of the International Congress of Gynæcology, as an *Honorary Fellow*; Dr. G. Wyndham Murphy, London; Mrs. Garrett Anderson, M.D.Paris, L.S.A.; Mrs. Marshall, M.D.Paris, L.R.C.P.I.; Mrs. de la Cherois, M.D.Brux., L.P.C.P.I.; Mrs. Scharlieb, M.D., B.Sc.Lond.; Miss Clark, M.D.Berne, M.K.Q.C.P.I.; Mrs. Hoggan, M.D.Zurich.

The following were balloted for and declared duly elected:—

Dr. R. H. Barker; Mr. A. L. A. Lathbury.

The Chairman announced that the following had been elected to serve as officers of the Society for the ensuing year:—

Honorary President.—Robert Barnes, M.D., F.R.C.P., London.

President.—F. Bowreman Jessett, F.R.C.S., London.

Vice-presidents.—Dr. Apostoli, Paris; A. H. Freeland Barbour, M.D., M.A., Edinburgh; Fancourt Barnes, M.D., London; F. C. Batchelor, M.D., New Zealand; Robert Bell, M.D., Glasgow; R. C. Benington, M.D., Newcastle-on-Tyne; Vincent Dickinson, M.D., London; W. A. Dingle, M.R.C.S., London; W. H. Fenton, M.D., London; James Murphy, M.D.,

Sunderland ; H. A. Reeves, F.R.C.S.Ed., London ; Heywood Smith, M.D., London ; R. T. Smith, M.D., London ; Professor W. J. Smyly, M.D., Dublin ; H. P. C. Wilson, M.D., Baltimore.

Treasurer and Librarian.—J. A. Mansell Moullin, M.D., London.

Council.—George Granville Bantock, M.D., London ; C. H. Bennett, M.D., London ; J. W. Byers, M.D., Belfast ; George Cleghorn, M.D., New Zealand ; T. M. Dolan, M.D., Halifax ; A. W. Edis, M.D., London ; Clement Godson, M.D., London ; G. P. Goldsmith, M.D., Bedford ; W. C. Grigg, M.D., London ; J. A. Shaw-Mackenzie, M.B., London ; Edmund Holland, M.D., London ; Mendes de Leon, M.D., Amsterdam ; T. Ligertwood, M.D., London ; H. W. Maunsell, M.D., London ; Robert O'Callaghan, F.R.C.S., Carlow ; Professor T. Oliver, M.D., Newcastle ; F. A. Purcell, M.D., London ; A. F. Rasch, M.D., M.R.C.P., London ; A. W. Mayo Robson, F.R.C.S., Leeds ; C. H. F. Routh, M.D., M.R.C.P., London ; Professor A. R. Simpson, M.D., Edinburgh ; W. Japp Sinclair, M.D., Manchester ; J. W. Taylor, F.R.C.S., Birmingham ; William Walter, M.D., Manchester.

Editor of the Journal.—Bedford Fenwick, M.D.

Honorary Secretaries.—A. D. Leith Napier, M.D., London ; F. F. Schacht, M.D., London.

In the absence of the treasurer (Dr. Edis), Dr. Bedford Fenwick read the report of the financial state of the Society, and presented the balance sheet. These were accepted *nem. con.*

A vote of thanks was then proposed to the retiring officers, by Dr. Macnaughton Jones, and seconded by Mr. B. Jessett. Dr. Vincent Dickinson replied.

The ordinary business then terminated, and the meeting resolved itself into an *Extraordinary General Meeting*.

The honorary secretary read the summons calling an Extraordinary General Meeting. The Articles of Association were then proposed for alteration as follows ; each resolution being proposed, seconded and unanimously agreed to, and then the Articles of Association *en bloc*, as altered, being unanimously adopted by the meeting.

That Section 7 (1) shall in future read—"The fees payable by Fellows of the Society shall be determined from time to time by the Council, and be embodied in the Bye-Laws."

That Section 8 (2) shall be altered to "The President shall hold his office until each Annual Meeting in January, but shall be eligible for re-election."

That Section 8 (3) shall in future read—"One-third of the Vice-presidents and one-third of the Council shall retire annually by rotation."

That Section 8 (5) shall be amended to include the Editor of the Journal as an *ex-officio* Member of the Council.

That Section 8 (6) shall read—"The Council shall consist of twenty-four Fellows, not less than one-third of whom shall reside within the Metropolitan Postal District."

That Section 9 (3) relating to the Hon. Secretary's tenure of office be omitted, and paragraphs 4, 5 and 6 be consequently re-numbered

That Section 9 (5) shall then read—"The Council may at any time make, alter or rescind Bye-Laws."

That Section 11 (1) shall read—"The Meetings of the Society shall be held at such times and places as the Council shall, from time to time, determine."

The Society then adjourned.

British Gynaecological Society.

Dr. RECEIPTS AND EXPENDITURE FOR THE YEAR ENDING DEC. 31, 1892. Cr.

	£	s.	d.		£	s.	d.				
To Balance brought forward 31st Dec., 1891.	.	26	10	7	By Expenses of Journal	.	.	.	200	3	1
„ Subscriptions	328	12	11	„ Rent and Attendance	.	.	.	129	6	6
„ Amount withdrawn from Deposit	.	100	0	0	„ Refreshments, &c. . . . .	.	.	.	15	11	3
„ Dividends on Investments	10	14	8	„ Postages, Stationery, Auditor's Fee, and Bank	.	.	.	.	.	.
„ Interest on Deposit at Bank	2	4	1	Charges . . . . .	.	.	.	10	4	8
„ Advertisements in Journal	79	0	9	Furniture . . . . .	.	.	.	5	15	6
					„ Balance 31st Dec., 1892, carried down . . . . .	.	.	.	186	2	0

£547 3 0

I hereby certify that I have examined the above account with the counterfoil receipt books and vouchers in connection therewith, and find it to be correct. I also certify that the Society holds the following Securities:—£270 Grand Trunk Railway 4 % Debenture Stock; £5 Caledonian Railway 4 % Preference Stock; and £100 on Deposit Account with the London and County Banking Company, Limited—all in the Treasurer's possession.

London, 10th January, 1893.

REVIEWS, &c.

THE *Annals of Gynæcology and Pædiatry* for August, 1892, contains an interesting paper by Dr. George E. Shoemaker, on "Three Cases of Extra-uterine Pregnancy." The first two were fairly characteristic, and recovered well after the usual operation. The third is sufficiently important to quote in full.

"The patient was sent to me by Dr. Henry Redmond. She was 32 years old; one child 6 years old; no miscarriages; a widow for six years (afterward found to have been illegitimately cohabiting for two or three months); menstrual history normal, with little or no pain; had missed no periods, but the last one, five weeks before, had lasted but one day instead of the usual five. The history was obtained with some difficulty. It was, however, learned that there had been four attacks of pain in the right side of the abdomen within a month, the first bringing her fainting to the floor. This was one week after the shortened menstrual period referred to. Each attack had been followed by bleeding, at first dark and clotted, then lighter. Pain, unknown before, continued in the right side and down the fore part of the right thigh to the foot, especially in walking. Examination was made under ether, with Dr. H. A. Slocum, when we separately made, unknown to each other, the diagnosis of unruptured extra-uterine pregnancy. [The contents of the tube, however, were shown at the operation to have already reached the broad ligament at this time by the presence of very firm clot in that locality, whereas rupture into the peritoneum occurred after this examination.]

"The conditions were as follows: Vagina and vestibule decidedly blue from capillary stasis, especially beside and

below the meatus urinarius ; cervix soft ; uterus slightly enlarged, movable through short excursus, except from side to side, but tilted to the left by an enlargement in the right tube and broad ligament. This mass was completely fixed ; its upper portion seemed to be continuous with the uterine cornu, while the lower presented a broad base to the right of the uterus, one half-inch above the external os, and extended half way across behind the cervix. This last-named portion [tube] felt like a sac of fluid. There was an abundant flow of thick, pinkish-red, bloody fluid, free from odour of decomposition, such a fluid in appearance as is sometimes seen in chronic salpingitis.

"There was no history of morning vomiting, and the breasts were negative. After recovery from ether, the patient was confronted with the diagnosis, and admitted cohabitation. Note the contrast. Here was sterility for six years, then cohabitation under excitement, with fear of detection. In Case No. I., a healthy woman with eight children, gets a tubal pregnancy under apparently normal conditions, three months after a miscarriage ! It illustrates the difficulties of diagnosis from the history.

"The case was put in a private room at the Presbyterian Hospital, operation being delayed twenty-four hours at the earnest solicitation of a colleague who was suddenly ill. This was a serious error, as during that time rupture occurred into the peritoneal cavity. At the operation thin, dark blood welled from the cavity as soon as the peritoneum was cut. The left adnexa were normal, and were not disturbed. The condition of the parts on the right side was totally different from that in Case I., since here a primary rupture had occurred into the broad ligament. A short, thick mass, representing the tube, lay low down, partly behind the uterus, where it was strongly adherent. The broad ligament proper could not be found, but on unrolling the tube upward, the fingers passed forward and outward into an irregular mass of old, hard clot, and what appeared to be placental tissue lying to the right of the uterus. This had raised up the perito-

neum, obliterating normal relations. The thickened uterine end of the tube was extremely soft, so that the ligature cut through three times in spite of care in tying. After everything removable had been scooped out and separated, in spite of adhesions, there remained a space bounded above and somewhat in front by a sac wall more than half-an-inch in thickness. There was no bleeding, but it seemed desirable to tie off a part of the ragged and redundant wall of the gestation sac out along where the broad ligament should have been. In doing this, through the very small parietal incision, and out of sight, the point of the needle, though not deeply passed, picked up the right ureter and it was included in the ligature. It is even now somewhat difficult to account for this, for the location of the ureter was held in mind at the time. The normal relations at the base of the broad ligament had been greatly disturbed by the dissection of blood beneath, making their establishment by touch very difficult. It is not unlikely also that the floor of the space was raised by a mass of cotton which had been used by an assistant in raising the uterus into the wound per vaginam. This manipulation had been necessary at an earlier period, in order to get a ligature on a very short stump. It is a source of regret that the three-inch incision was not made larger, in order to facilitate the management of a difficult case.

"The accident being unsuspected, the cavity was flushed and drained, and the patient put to bed in fair condition, the pulse an hour later being 100. No bleeding. Tube out in twenty hours. For the first twenty-four hours the condition presented nothing unusual except restlessness. The patient was extremely unreasonable and difficult to manage, behaving like an injured animal ; but as she could not understand the language of her attendants, and appeared to feel disgraced, I thought this might be largely mental. She passed by catheter, at various periods, forty-one and a-half ounces of urine in the first twenty-four hours, and complained very little of pain, at no particular locality. She vomited but once.

"During the second twenty-four hours more nausea

developed, and the same restlessness continued. As there was some tympany and some general abdominal pain complained of, the administration of Rochelle salt, hourly, was begun, nutrient enemata being given with small quantities of beef juice and beef tea, by the mouth. She passed sixteen ounces of urine during this time. The respiration continued high, thirty to forty, though the pulse varied from ninety-eight to 118 only. The temperature, which had touched 100 for the only time two hours after the operation, remained about normal, but at the end of forty-eight hours dropped to ninety-seven and a-half, and the patient looking anxious and having tympany, the onset of peritonitis was feared. Efforts to move the bowels were re-doubled, but in vain. Enemas containing magnesium sulphate, glycerine or turpentine, were at once rejected, and could not be introduced above the sigmoid by catheter or rectal tube. Salts and calomel were vomited. The urine was very scanty. Just before death, which occurred at the end of seventy-two hours, a small amount of faecal matter was secured per anum, this difficulty in moving the bowels being the dominant thought in my mind, as obstruction was feared. At no time was there pain localised in the right side, nor did re-opening of the abdomen seem justified. The drop in temperature to 97° was not followed by a rise, and peritonitis did not develop. The patient seemed to have died exhausted, having to the last pulled herself restlessly about the bed, with little or no delirium, no coma, the mind remaining clear to the end. There was very likely a toxæmia, but not a true uræmia, from impaired renal action, sympathetic in the opposite kidney; there was also an element of shock from what appeared like bowel obstruction. The notes of the pathologist of the hospital, Dr. H. E. Cattell, are appended. I am indebted to him also for photographs and sections of specimens in the other cases.

"X., German; admitted to the Presbyterian Hospital, December 17th, 1891; died December 22nd, 1891. Ward, private. Visiting physician, George E. Shoemaker. Clinical

diagnosis, extra-uterine pregnancy. Pathological diagnosis: death due to shock, from removal of a right tubal pregnancy, November 23rd, 1891.

"Body of a well-formed girl, with an anxious look on her face. No rigor mortis. P. M. lividity well marked. Decomposition of abdominal parieties. In abdomen, incision below umbilicus; wound in good condition. Large omentum, dark and congested; on the small bowel, one point of attachment to wound. No signs of general peritonitis, though in a few places lymph had been thrown out. The sigmoid flexure made an S turn, and may have accounted in a large measure for the difficulty with which the bowels were moved.

"The intestines filled with gas; contents small in amount and fluid.

"Lungs: adhesions on right side; no pneumonia.

"Heart: small; more fat than normal; not opened.

"Kidneys: anæmic.

"Liver: apparently normal.

"Condition of wound: There had been two ligatures applied, the one to the pedicle and the other in the broad ligament; the latter had included the right ureter, and had caused almost complete retention of the urine on that side. The ureter was enlarged to over double its normal size above the ligature, and was tortuous and filled with urine, under pressure.

"There had been no hæmorrhage. Rupture of tube before operation had probably taken place posteriorly. Peritoneum below that covering kidney congested and hæmorrhagic. Both ovaries present. Left tube and appendices not touched in operation."

Injury to the ureter during operation probably occurs with considerable frequency, though it is hard to find cases recorded.

Pozzi¹ considers that the ureter is often ligated, and that many of the deaths attributed to shock are really due to this accident. Systematic writers generally say that the accident

¹ *Gynæcology*, 1891, p. 305.

is not infrequent, but they fail to give cases, except those of Hegar, Simon, Nussbaum, Walter and Tauffer, to which many refer. G. Eustache² made a search of the literature, but could find only three cases in Germany and none in England or France. Joseph Price³ reports having severed both ureters in a hysterectomy, and afterwards switched them into the bladder with recovery. The writer has verbal knowledge of an unreported case in which both were ligated, but afterward released because of suppression. Recovery. Greig Smith⁴ states that Simon, Archer, Boeckel and others have done nephrectomy for ureteral fistulæ, caused by accidental wounds during hysterectomy.

Henry Morris,⁵ of London, speaks of having himself divided the ureter and afterward turned it into the vagina. He does not say with what result.

Ligation of one ureter is not necessarily fatal, but, of course, might contribute to a fatal shock. Unfortunately no train of symptoms can be given which would surely lead to a discovery of the accident if a single ureter is occluded. Pain would be looked for as most marked from analogy with calculous obstruction of the ureter. In my case it was not characteristic or very marked. There should be reflex vomiting. In my case vomiting occurred but once in the first twenty-four hours and seldom in the first forty-eight. It was no more marked at any time than we at times see in cases which do well. Distention from hydronephrosis cannot be looked for. This occurs after many weeks only when there is partial and not total obstruction, the pyramidal portion of the kidney being gradually absorbed, and the cortical portion being distended so as to form a large sac. "If the ureter be completely blocked at once, as it is by a calculus in a case of obstructive suppression, the flow of urine ceases almost imme-

² *Arch. de Tocol.*, April, 1880.

³ *Transactions Obstetrical Society of Philadelphia*, 1891, p. 137.

⁴ "Abdom. Surgery," p. 560.

⁵ "Int. Ency. Surgery," V., 527.

diately and the kidney undergoes atrophy without any dilatation whatever."⁶

The flow of urine is worth noting. Sudden closure of one ureter is usually followed by intense congestion of the corresponding kidney, and partial suppression in the other from shock.⁷

It will be noted that in this case there was abundant secretion for twenty-four hours, the bladder being empty at operation and the catheter bringing forty-one and a-half ounces at various times in twenty-four hours. There were sixteen ounces in the second twenty-four hours, but none is recorded by the nurse for the day of death. It could not be expected when no fluids had been retained for many hours before death, and when copious vomiting of mucus was going on, that there would be much urine secreted, even if the kidneys were sound.

The only points of symptomatology, which reflection on this unfortunate case suggest, are restlessness and anxious expression, with gradual diminution of urine secretion. There should have been pain of a definite character as in calculus, but there was not, and the conclusion is inevitable that after an operation there may be so many explanations for the same symptoms that, in the absence of localised pain, recognition of the accident will always be difficult or impossible.

The same Journal, for October, has a long and very instructive article on "Uterine Hæmorrhage, Puerperal and Non-puerperal," by Dr. A. Vanderveer, illustrated by many typical and well detailed cases.

In the November number there was an interesting article by Dr. H. J. Boldt, on "Vaginal Hysterectomy in Cancer of the Uterus." He has had forty-four cases, with three deaths. With reference to the decreasing mortality of the operation, he says:—"Prof. B. F. Schulze, of Jena, in the citation of his nine vaginal hysterectomies, quotes Hegar's accumulated sta-

⁶ Bruce Clarke, "Surgery of Kidney," p. 58.

⁷ Mansell Moullin, "Surgery," p. 956.

tistics: 25 per cent. mortality (direct results); Sanger's, out of 133 published operations, as 28.6 per cent., and Schmidt's continued statistics of 242 total extirpations with 26.3 per cent. Now, the results are different. G. Winter quotes statistics of large German clinics:—

Olshausen...166 vaginal hysterectomies, 19 deaths.

Schauta.....	65	"	"	5	"
Fritsch.....	103	"	"	10	"
Kaltenbach..	60	"	"	2	"
Leopold	80	"	"	4	"

Total ...	474			40	"
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which equals 8.4 per cent. direct mortality. Paul Zweifel quotes 77 vaginal hysterectomies done in Leipzig with four deaths, or 5.2 per cent. mortality. Dr. Joseph Price, I think stated in a discussion, that his rate of mortality in over forty cases, was less than 5 per cent. Dr. H. T. Byford had twenty vaginal hysterectomies, with 5 per cent. mortality. This shows that as the technique is improved, and the experience of individual operators increases, the mortality rate will constantly diminish, so that eventually, I hope, the operation in experienced hands will come down to 3 or 4 per cent. mortality in immediate results."

The following conclusions are also very important, especially in connection with the important paper by Mr. Jessett, which appears in the present number of this Journal. "To show how important this operation should be, it is only necessary to consider how many deaths from cancer of the uterus occur, and also to view the number of patients who have their life prolonged by its early performance. For the first purpose, the statistics of Glatter are perhaps the most valuable of any in our possession, embracing all deaths of women from 21 years of age and upwards which occurred in Vienna for a period of eight years, viz., 1862-69.

Ages.....	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85
Total deaths....	3899	3703	3094	3245	2855	2765	2579	2725	2890	2955	2724	1964	167
Died of cancer of the uterus ..	4	39	45	118	133	183	142	108	59	60	25	13	6

"These statistics show that from the thirty-sixth to the sixtieth year carcinoma of the uterus is most prevalent, and from the forty-sixth to the fiftieth year, the period when it is still more liable to occur. An examination of the reports of various life insurance companies, shows an average mortality of 5.5 per cent. from cancer of the uterus in women. For the second purpose, the number of patients surviving the operations without recurrence after two years must be considered, for it is generally conceded that a patient with cancer of the uterus does not live longer than from one to two years after the invasion of this dreadful disease, unless something is done for them."

The same Journal for January, 1893, has a clearly written and useful article upon "Posture in Relation to Obstetrics and Gynæcology," illustrated by five photographs of the different positions.

In the same number Dr. Hirst reports a case of pregnancy advanced to the fifth month, in which alarming symptoms developed. Examination revealed a large tumour alongside of the womb between the folds of the broad ligament. Abdominal section was performed, when the large mass was found to be fluctuating. The tumour contained about two quarts of pus. The sac was stitched to the abdominal wall and thus drained, and the patient recovered. The author is disposed to regard the tumour as a suppurating utero-ligamentary cyst, although such a termination of a monolocular broad ligament cyst, which usually contain a clear, limpid fluid, is exceedingly rare.

RÉPIN (*Annales de Gynecologie et d'Obstetrique*, August, 1892) exhibited before the Paris Anatomical Society two dermoid ovarian cysts. In one specimen a small tuberous mass sprang from the inner side of the cyst. It was covered with skin and hair, and contained irregular masses of bone and cartilage. In the interior of the cyst of the opposite ovary was found a much larger mass, containing a rudimentary skeleton. The extremities were much deformed, but very distinct. The

phalanges and tarsal bones of the right foot and the corresponding bones of the right hand could easily be counted. The cranium was a shapeless mass, including teeth and one salivary gland. The nervous system was represented by the great sciatic nerves. There could be found no viscera in the skeleton, but a coil of intestines lay outside it.

Répin believes that all dermoid ovarian cysts represent rough draughts of an embryo. This is not due to foetal inclusion. One-yolk twins are the origin of inclusion, the allantois of the future parasite penetrating the abdominal cavity of the future autosite or host and contracting vascular adhesions with the autosite's intestines. The parasite is an acardic monster, and is always attached to intestine. Dermoid cysts (often bilateral) cannot be explained by inclusion. Répin believes in parthenogenesis. Segmentation of a virgin ovum is seen in birds, mammals, and even women.

RUNGE (*Archiv. für Gynäkologie*, Band xli., Heft 1 and 2) records a case in which pregnancy occurred after amputation of the vaginal portion of the cervix for epithelioma, while the stump was being treated by cauterization. At the close of pregnancy the cervical canal was found to be closed by a band of scar tissue one half cm. broad and two and a-half cm. thick, extending from above and to the left side to below on the right. The surrounding tissue was soft and elastic. The scar tissue was cut through during labour with some difficulty. The opening thus made dilated slowly, although the pains continued strong. Eleven hours later, as rupture of the uterus was threatened, craniotomy was performed upon the already dead child. There was no further tear. Puerperium normal. Runge prefers delivery by the natural passages rather than by Cesarean section for the regular procedure. Incisions should be made to the vaginal arches.

The *University Medical Magazine* has the following interesting excerpts:—

MIDDLETON MICHEL (*Medical News*, October 8th, 1892)

tabulates the result of his investigations upon cancer amongst negroes for the past fourteen years. His conclusions are directly opposed to the views generally accepted, and prove that uterine cancer is almost as prevalent among black as among white women, the ratio being 1 5-7 cases among the white to 1 3-7 cases among the blacks to every thousand of the population. The investigations extend from the year 1878 to 1891 inclusive, and comprise 101 cases, forty-eight among the whites and fifty-three among the negroes. Dr. Michel has been connected with the Board of Health of Charleston, S.C., for a number of years and has had exceptional opportunities for studying this question, and is satisfied that his statements are correct. He has repeatedly found carcinoma associated with fibroids of the uterus, as well as alone. There is no attempt made to distinguish between true carcinomata, cancrroid and malignant papillary tumours, but the term carcinoma has been used in a somewhat generic manner. In considering the question of supposed immunity of the negress from uterine cancer the query arises, Why should it be so? Clinical facts show cancer to occur in other parts of the negress—in the breast, stomach, kidneys and rectum, and when we consider the unbridled licentiousness of this people, their profligacy, the attendant traumatism about the cervix in women who have borne many children, "it is, to say the least, scarcely to be supposed that the black race should be exempt."

The *American Journal of the Medical Sciences*, for September, has an interesting article by Dr. George M. Edebohls, on "Combined Gynæcological Operations," "by which is meant the performance, at the same sitting and upon the same patient, of various gynæcological operations heretofore usually distributed over several sittings. Not alone are valuable time and much bodily suffering and mental anxiety thus saved the patient, but the results of our procedures it is contended are likely to be much more perfect.

"The writer firmly believes that the next step forward in

gynæcological surgery will be in the direction of the *simultaneous* performance of as many operations as the patient may require to make her well, and that the gynæcologist of the highest skill in operative work—which, to my mind, almost necessarily presupposes also the greatest skill in diagnosis—will consider that he has done justice neither to himself nor to his patient, unless, as a rule, admitting of but rare exceptions, he will be able safely and well to do all the surgery required in her case at a single sitting.

“The combinations, in the experience of the writer, perhaps most frequently called for, are curettement and amputation of the cervix or trachelorrhaphy, and the combination of these with perineorrhaphy. These combinations should always be easily performed within the hour—he has done them repeatedly in half the time—and the writer holds that it would be gross injustice to a patient at the present day to submit her to two sittings for their performance. Indeed, he states his opinion that an operator claiming to be an expert should, as a rule almost without exception, be able to perform any combination of operations that may be required in the individual case, excluding only those combinations into which shortening of the round ligaments enters, within an hour and fifteen minutes. The operation for shortening the round ligaments—really a double operation—properly performed, requires from twenty to forty-five minutes, and may even, in case of unusual difficulty in finding and isolating the ligaments, be protracted a little beyond the latter limit.

“The combination of operations of the first class next most frequently called for in the writer’s experience, is curettement, amputation of the cervix or trachelorrhaphy, and shortening of the round ligaments. This combination he has performed fourteen times, and never required above seventy-five minutes. In one additional instance a perineorrhaphy was added to this combination without exceeding the time-limit just named.

“Next in frequency come the two following combinations:—1st, Anterior colporrhaphy and colpo-perineorrhaphy; 2nd,

Amputation of cervix, shortening of round ligaments, and perineorrhaphy. I find on my records memoranda of three of the first and four of the second combinations performed during the past two years. The time required for the first combination averaged thirty, that for the second combination seventy-five minutes. In one additional instance a trachelorrhaphy, in a second an amputation of the cervix, and in a third a curettement were added to the first combination, all performed within the hour.

"Nephrorrhaphy for movable kidney entered into combination with operations enumerated under the first class three times. Once it was combined with curettement for chronic endometritis and catarrhal salpingitis. A second time it was performed at the same sitting with curettement and trachelorrhaphy. In both instances I finished within the hour. On a third occasion curettement, shortening of the round ligaments, and nephrorrhaphy were performed together in one hour and twenty minutes.

"There is no excuse for a mortality in any required combination of operations included in the first class. Perfect asepsis secures against infection, and the good judgment, alertness and skill of the operator should insure his patient against the risks of prolonged anæsthesia and accidental dangers.

"Perhaps the most frequent, as well as the simplest, of the combinations into which an abdominal section enters is the combination of curettement with salpingo-oöphorectomy for diseased tubes and ovaries. This combination, rationally so often called for by the co-existence and interdependence of endometritis and salpingitis in their various forms, has been quite freely discussed of late, more especially at the meetings of the New York Obstetrical Society. The consensus of opinion among prominent gynæcologists is almost unanimous that the two operations are, as a rule, required. The only difference of opinion seems to be as to whether they should be performed at the same sitting, and if so, whether the curettement should precede or follow the salpingo-oöphorec-

tomy. My own rule has been to do the curettement first, even when the presence of pus in the pelvis has been positively diagnosed, being careful to do the curettement with the uterus *in situ*, i.e., without dragging down the organ.

"The abdomen is then opened, the diseased parts removed, and the operation completed by a final irrigation of the uterine cavity with 1:2,000 sublimate solution, to remove any infectious matter that may have come down from the tubes into the uterus during the manipulations within the abdomen. I have proceeded thus in quite a number of instances, and have never had cause to regret doing so. I prefer this order to doing the laparotomy first, closing the abdomen, and taking the chances of internal hæmorrhage by slipping of an intra-abdominal ligature during the subsequent curettement."

As an instance of what Dr. Edebohls has actually done, the following paragraph is highly significant and instructive:—

"A rather complicated combination of operations I have reported in a case presented to the New York Obstetrical Society. As the case is described in full in the *New York Journal of Gynæcology and Obstetrics*, April, 1892, p. 379, I will here only outline it:—*Suppurating intraligamentary cystoma; unilateral chronic pelvi-peritonitis; secondary salpingitis and appendicitis; extensive laceration of cervix, and of perineum through sphincter. Curettement; trachelorrhaphy; removal of cyst, tube and appendix vermiformis at one sitting; recovery.* I will merely add that three months later the patient returned for perineorrhaphy for complete tear through sphincter, which operation has been successfully performed. I might cite additional instances of laparotomies for various conditions combined with plastic operations, all successful, were there any special object in doing so."

The subject undoubtedly demands more attention in this country than it has yet received. The only other paper on this subject which is known to have been published, is one by Dr. Mundé, on "Combined Operation in Gynæcology," in the *New York Medical Journal* for May 18, 1889.

The number for October contains a valuable paper by Dr. Theophilus Parvins, giving the facts of fifty-four cases of molar pregnancy, in tabular form. He sums up the practical teaching of these statistics as follows:—

“In examining these tables one is struck by the fact that the first is rarely a molar pregnancy; there were only four primigravidæ in fifty-four; some of the women had ten, one eleven, another twelve previous pregnancies.

“Endometritis has been suggested as one of the causes of molar pregnancy. Thus, a recent writer, reporting some cases occurring in his practice, observes: ‘I am inclined to think that a disease of the uterus, especially of the endometrium, plays an important part in the causation in many cases, and may be aided by a debilitated condition of the system.’ But this hypothesis finds no support in these reports, for endometritis is not mentioned as being present in a single case; moreover, several women are stated to have had a normal, soon following the abnormal, pregnancy. Indeed, so far as careful examination of these moles testifies, the condition of the chorion has more to do with their production than that of the decidua. It seems to me, however, it would be a mistake to reject disease of the endometrium as a possible cause, and this opinion is confirmed by a recent case under my care, in which such disease was present both previous to the conception and after the expulsion of the mole. Indeed, so strongly am I impressed with this possible etiology in some cases, that if recurrence of this accident was observed, the recurrence being after a brief interval, my belief is that careful examination would discover an endometritis, the appropriate treatment of which might avert a succeeding abnormal pregnancy.

“Several of the histories show that Nature is ready, upon slight provocation, to cast off the abnormal product; the uterus is, as it were, in a condition of unstable equilibrium, and tampon, catharsis, or the gentle use of the uterine sound may disturb that equilibrium, exciting its activity.

“If uterine action has begun, is interference by active means advisable? When we remember that in twenty-three

cases collected in Munich the issue was unassisted—save in one case, in which the hand was employed to remove the detached mass from the os uteri—we may doubt whether placental forceps and curettes will be required, save in the rarest cases. Daily antiseptic vaginal injections may be advisable if the process of detachment and expulsion is slow, and the tampon and ergot if there be much hæmorrhage.

“So far as can be established by these statistics, the average duration of a molar pregnancy is a little more than four months; such pregnancy may last only two months or extend to twelve. It is probable that in many cases opium, rest, and similar means were employed to prevent miscarriage, and thus this occurrence was often delayed. Therefore, it may be regarded as almost certain that the average duration of this abnormal pregnancy should be stated as between three and four months.” In connection with this, the excerpt on another page of this Journal is interesting.

The American Journal of the Medical Sciences, for October, 1892, has an important article on “The Relation of Micro-Organisms to the Diseased Endometrium,” by Ernest Laplace, M.D. (of Philadelphia), which deserves much attention from British gynæcologists and which is as follows:

“The following are the results of some experiments made by myself in Koch’s laboratory in 1887-88, and heretofore unpublished, upon the pathology of the endometrium. I was at that time engaged upon solving the problem of causing mercurial solutions to retain their virtue and preventing the formation of a precipitate in the presence of albuminoid substances. Having prepared and described that which has since been known as the acid sublimate—that is, the combination of sublimate with an acid (say tartaric, citric, or any other), whereby these above-named objections were met—a direct application of this was essayed upon patients in the various clinics in Berlin.¹ Among the many experiments

¹ Berliner med. Woch., 1887, No. 54.

made were attempts at disinfecting the endometrium. Of course, I had to find out what was to be destroyed in the way of living germs in order to establish the action of the antiseptic. It was in this way that I was led to investigate the conditions of the endometrium in its relations to micro-organisms. In order to have a more accurate notion, I examined the scrapings from the uterus of six healthy women. This was done with the sterilised platinum loop and brought into twelve tubes, six containing peptonized bouillon and six glycerin-gelatine. The latter were used for pouring plates. The same experiment was repeated in each of the six cases, with the following result :

"The loop was passed through the length of the uterus to the fundus, scraping the mucous membrane, and then brought out; this was then introduced into the respective tubes. The bouillon tubes were placed in the incubator, and became turbid with the development of micro-organisms on the second day, in each instance. The gelatin plates developed an average of twelve colonies of bacteria each, which, on examination with the microscope, proved to be mostly the various streptococci of suppuration. There were, however, a few colonies, the identity of which could not be easily recognized, and consequently transplantations of these were made into fresh bouillon tubes, and after two days' incubation a series of three guinea-pigs was inoculated with them. One of the colonies was of a whitish, mother-of-pearl appearance, with dentated edges, and singly these organisms presented the appearance of bacilli, about the same length, but much thicker than the tubercle bacillus. The guinea-pigs inoculated with ten drops of the fluid culture of these germs died within from five to seven days, without any special external manifestations. Their autopsy showed invariably the presence of the same organism in the blood, and the liver and kidneys were enlarged and fatty, showing that they had succumbed to a rather severe form of septicæmia. For convenience' sake we will call this micro-organism α . A second organism not recognisable was one that presented very small

colonies, perfectly white, and which soon liquefied the gelatin. On microscopical examination, these colonies were found to consist of micrococci. Bouillon pure cultures were made from these colonies, and three guinea-pigs inoculated with ten drops of this culture. In two instances, these animals died of a form of pleuro-pneumonia in from four to six days. The third pig did not suffer from the inoculation. This unnamed organism we will call *y*.

"A third colony, the identity of which I could not recognise, presented a grayish appearance, with a troubled surface; it was also found to be a micrococcus. Upon injecting bouillon cultures of it into guinea-pigs the animals presented no reaction whatever. This organism we will designate as *z*.

"As a result of this group of experiments, we see that in the healthy endometrium are present numerous organisms, pretty much the same as would be found in the nose, and their presence might be accounted for by their travelling from the pudendum into the vagina. The normal secretions of the uterus seem to retain them indefinitely. They seem to do no more actual harm there than do the hundreds that inhabit the saliva. They are kept at a respectful distance from the bloodvessels by the mucus, and, *not developing*, do not exert any irritation—in a word, they exist quite superficially.

"I then, through the courtesy of Dr. Fehleisen, procured specimens of secretions from women with endocervicitis.

"Using the platinum loop in precisely the same way that we did above, and inoculating the same number of bouillon tubes, we found that the liquid was troubled but a few hours after inoculation, while the gelatin plate in each instance developed an enormous amount of colonies—say between three hundred and four hundred—remembering that we apparently took the same quantity as in the case of the healthy patients.

"In the plate cultures we recognised vast numbers of *strep-tococci pyogenes aureus*, *albus*, and *citreus*, a few *bacilli pyo-cyaneus*, and also many of our unnamed colonies which we had found in the healthy patient, and which we designated

above as *x*, *y*, and *z*. It happened that in these cases we did not find the gonococcus of Neisser. All that it was in our power to observe was the difference in the number of colonies to each plate and the presence of the *bacillus pyocyaneus*, which we had not found in the case of the healthy women.

"After having carefully cleansed the parts with warm water and removed as much of the secretion as possible, the experiment was repeated, scraping the mucous membrane with the platinum loop. The result varied but slightly, eighteen plates thus prepared showing an average of two hundred colonies each.

"From the above experiments, it seems that when the mucous membrane of the cervix is inflamed, the micro-organisms normally present exist in much vaster quantity. Here we might ask ourselves whether they exist as cause or effect. But we prefer to postpone the consideration of this point. Prof. Martin furnished me, at his clinic, with the scrapings from six different patients whom he had curetted for chronic endometritis. In two cases there were pieces of diseased tissue of a size sufficient to be imbedded in celloidin, and sections were made. These were found to consist of a mass of fibrous tissue, corresponding to what Martin has styled 'interstitial endometritis,' but which we know to be simply the expression of a slow and chronic form of inflammation. The glandular elements seemed compressed and diminished in size and calibre, the mass of the specimen appearing to consist of closely organised fibres. Here and there a few spindle-shaped cells and still fewer young round cells. Staining these sections by Gram's method, we distinguished in the depths of this tissue the presence of streptococci here and there.

"Some sections presented more of the so-called glandular form of endometritis; that is, the epithelial lining of the glandular acini was greatly hyperplastic, forming in some places arborescent excrescences, the surface of which consisted of cells disintegrated and disintegrating. In these but little fibrous tissue was to be found, and we concluded that

the inflammation was of a more superficial character and acute in nature. Here throughout the inflamed area could be distinguished vast numbers of micro-organisms. I would not weary the reader with a further detailed histological description, but say simply that in both forms were present in the tissues themselves, micro-organisms of apparently the same nature as had been found theretofore, but now imbedded in epithelial cells of various shapes and even in the deeper fibrous tissue of interstitial endometritis. The identity of the various micro-organisms was proved by particles of this tissue being placed in glycerin-gelatin and poured plates, which developed no colonies which we had not recognised before. Though the colonies were plentiful (50-100), I cannot lay any stress upon this point, inasmuch as it was impossible for me to compare the particle of scraping with the apparently corresponding amount of fluid taken up in the platinum loop. Three cases of women having gonorrhœa were examined. The same quantity of secretion was examined. Plates developed 200 to 300 colonies, but no gonococci, as they do not develop on gelatin. Microscopically, the secretions contained large numbers of micrococci and gonococci. Scrapings from the uterus showed the presence of the gonococcus throughout the degenerating epithelial cells.

"From the above experiments we gather that—

"1. The normal endometrium of uterus and cervix is a harbour for vast numbers of micro-organisms, most of which are known to us, but some still unknown but possessing poisonous qualities for guinea-pigs.

"2. The inflamed endometrium contains the same kinds of micro-organisms, but in vaster quantities, the superficial exfoliating cells also containing them.

"3. In chronic endometritis the secretions contain about as many infectious organisms, the mucous membrane and fibrous tissue become greatly hypertrophied under the continued development of these organisms, and whether this chronic condition be simple or gonorrhœal, we find the germs both in the epithelium and fibrous tissue.

"It now becomes necessary to explain how these organisms get to the deeper parts, and explain how far their relation as a *cause* of the inflammation extends.

"It is plain that the mere presence of the micro-organisms does not suffice to constitute disease. Disease is the reaction upon the system—local or general, or both—resulting from the *developing* organism. In the uterus the normal secretions are a *poor* culture medium for germ life, and at the same time keep the micro-organisms at a distance from the bloodvessels. If given the proper opportunity, however, if furnished with blood or serum retained any undue length of time within the uterine cavity, micro-organisms develop therein with as remarkable rapidity as they do upon artificial culture media in the laboratory. Now the conditions will have changed, and enormous hordes of bacteria soon develop from those already present, and infect the tissues. In our observation, judging from the reaction of tissues under the influence of developing bacteria elsewhere, we would say that cold is, perhaps, the most frequent cause of the initial process; the congestion which soon follows the action of cold upon the tissues being familiar to us all. Next follows the exudation of serum, which is soon contaminated by the bacteria in the neighbourhood; these finding their most favourable soil develop rapidly, producing a chemical irritant or ptomaine which is the decomposition of the serum incident to their growth; this acts as a direct chemical irritant which keeps up indefinitely the irritated condition of congestion, and hence hypernutrition of superficial cells, proliferation of cells resulting, which cells naturally find their protoplasm inoculated from the first with the bacteria under whose impulse they developed.

"In the chronic form, with hyperplasia of fibrous tissue, there occurs to me no explanation but that the original infection took place as above described, and that, either from neglect or other causes, the parts have become so irritated that the deeper fibrous tissue, under constant congestion, became infiltrated with white blood corpuscles by diapedesis,

which gradually built new fibrous tissue, dovetailing with that already existing.

"Simply from a histological and pathological standpoint, inasmuch as the foundation of treatment in disease is the removal of the cause, finding that these micro-organisms exist nearly always to a certain depth, curetting is the rational treatment—removal of all the diseased cells through which we could not expect an antiseptic to act. Thorough scraping being done, it but remains to so sterilise the regenerating mucous membrane as to leave it uncontaminated. Here the acid sublimate solution finds a happy application in the strength of from 1 : 2000 to 1 : 5000. At the end of a few days the uterus replenishes itself with a new mucous surface."

We give this important paper in full, as it will probably be much quoted in future. But it is difficult to follow the logical reasoning which has led the author to propose curetting. If these micro-organisms exist in healthy states of the mucous membrane, and are only rendered harmless by the normal secretions of that membrane, it would not appear scientific to remove the membrane and expose the deeper absorbent surfaces to the full fury of the anonymous bacteria. And if these germs exist in the deeper structures, how deeply is the curetting to be done, to extirpate them all?

**SUMMARY OF GYNÆCOLOGY, INCLUDING
OBSTETRICS.**

GYNÆCOLOGY.

Ovarian.

A NEEDLE IN THE OVARY.

FRANK W. HAVILAND, M.D. (*Medical Record*), reports a case where he removed an extensively adherent pus tube and ovary. The adhesion found, involved the sigmoid flexure of the colon, the tube, ovary, uterus and omentum in a large mass. On examination of the ovary an abscess was found, inside of which a needle was discovered. The appearance of the needle, about three-quarters of an inch of an ordinary sewing needle, proved it to have rested there some time. The explanation of its presence there was as follows: That it was swallowed and passed through the alimentary canal until it reached the colon, when it perforated the walls, passed on through a fold of omentum into the peritoneal covering of the posterior wall of the uterus, and thence on into the right ovary carrying with it infection from the alimentary canal.

TUBAL MENSTRUATION.

LANDAU and RHEINSTEIN (*Archiv für Gynäkologie*, Band xlii., Heft 2) throw fresh light on this interesting subject by their study of the condition of the mucous membrane of the genital tract in cases of atresia and malformation. Their observations were briefly as follows: The endometrium was unchanged. The tubal mucosa alone appeared to have been functionally active, having undergone general hypertrophy. In cases of atresia, as well as of malformation of the genital tract, the mucosa was at first normal throughout, but the en-

ometrium subsequently became destroyed in consequence of the pressure of the retained menstrual blood ; the mucosa of the tube was most resistant, on account of its greater power of absorption, but finally it also suffered from pressure. Hitherto there have been two theories with regard to the origin of hæmatosalpinx in cases of atresia—the reflex theory of Goupil and Bernutz, and the view that the blood transudes from the tubal mucosa. Although the former is probably correct, it has not yet been positively proved. The writers believe that they are the first to present anatomical facts which seem to substantiate the latter view. In the most striking case the tube was uniformly swollen, its serous covering was deeply congested, and the mucous membrane was much thickened and filled with blood-corpuscles, the vessels, not only of the mucosa but of the entire tubal wall, being greatly dilated. The uterus, on the contrary, was absolutely normal, neither the endometrium nor the muscular tissue showing any signs of congestion or infiltration, the vessels containing little blood, and the uterine cavity being empty. It would seem to follow from this that the tubes had menstruated, and that they alone took part in the process.

THE INTERNAL CROSSING (UEBERWANDERUNG) OF THE OVUM.

VEIT (*Centralblatt für Gynakologie*, 1892, No. 27) criticises the views of Wyder and Pestalozza on this vexed question, who sought to show by reference to certain anatomical specimens that the impregnated ovum might escape from one tube into the uterus, and crossing the uterine cavity enter the opposite tube. The affirmative evidence was deduced from cases of tubal pregnancy in which the distal end of the affected tube was impervious ; but, as is well known, the closure may occur *after* impregnation has taken place. All the evidence seems to be in favour of the belief that this supposed internal crossing of the ovum never occurs.

THE POSITION OF DERMOID CYSTS WITH RELATION
TO THE UTERUS.

FREUND (*Centralblatt für Gynäkologie*, 1892, No. 31), after discussing this question at considerable length, arrives at the conclusion that when a dermoid cyst is found anterior to the uterus it has developed in an ovary which was congenitally displaced, and that when displaced it tends, like a normal ovary, to return to its former position.

TUBO-OVARIAN CYSTS.

OTT (*Centralblatt für Gynäkologie*, 1892, No. 37) describes a specimen which seems to throw fresh light upon the pathogenesis of these cysts. He opposes the ovulation theory of Richard, Klob, and others, because the parovarium contains no follicles which could undergo cystic degeneration, and rather inclines to Veit's view that they are of inflammatory origin, being secondary to adhesion of the tube and ovary. It is fair to infer, moreover, that the cyst-formation may be congenital, due to some failure of development, as in the specimen presented the opposite tube was rudimentary, and the affected tube and ovary were so closely united that they could not be separated.

EXTIRPATION OF PYOSALPINX AFTER PERFORATION.

WINTER read a paper on this subject at a recent meeting of the Berlin Obstetrical Society (*Centralblatt für Gynäkologie*, 1892, No. 48), in which he advocated coeliotomy for the removal of pus tubes that had previously ruptured into the vagina or rectum. The dangers to be apprehended in these cases are: (1) Escape of pus into the peritoneal cavity, which can be avoided by aspirating and washing out the sac before removal. (2) Opening into a hollow viscus, especially the rectum; but this is not greatly to be feared, for the fistulous opening is usually quite small, as it is shut off by inflammatory adhesions. (3) There are unusual difficulties in the technique, rendering the operation long and tedious, but

these are best overcome by placing the patient in Trendelenburg's posture.

In the discussion which followed, MARTIN approved of the course adopted by the reader, and said that the prognosis was always good when the tube had opened into the rectum low down; if, however, the fistulous communication was high up in the large intestine, the perforation in the bowel must be sutured. If, after opening the abdomen, it was found that the gut would be extensively injured by separating the adherent sac, he advised puncturing the latter *per vaginam* (directing the needle with the fingers within the pelvis), closing the abdominal wound, and then incising and draining from below.

DOUBLE OVARIAN TUMOUR ASSOCIATED WITH RUPTURED TUBAL PREGNANCY.

The following interesting case is thus described by Mr. Christopher Martin in the *Birmingham Medical Review* for November, 1892:—

In the middle of June, 1892, Dr. Power, of Atherstone, asked me to see with him, in consultation, a case which he suspected to be one of ectopic gestation. The patient was 28 years of age, and had been married nine years. She had had three children, the last four and a half years previously, but no miscarriages. Menstruation commenced at the age of 15. Until February, 1892, it was quite regular, occurring every three and a half weeks, lasting from seven to ten days, profuse and painful—the pain beginning two days before the period, and lasting for about five days. She menstruated as usual in the middle of February, 1892 (17 weeks before operation). She saw nothing for five weeks (12 weeks before). At the end of the fourth week of amenorrhœa (13 weeks before) she was suddenly seized with severe cramp-like pains in the back and lower abdomen, lasting for three hours. "They were worse than labour pains, and doubled me up." A week later (12 weeks before operation) the pains recurred, and profuse flooding set in. She now passed a flattened piece of skin, resembling a piece of tripe in appearance, whitish in colour, and

about three inches long. After this came away, the flooding abated somewhat, but did not entirely cease, however, as there was a constant dribbling of nearly pure blood, the patient never being a day free. Eleven weeks before operation she had a third attack of paroxysmal pain, and a fortnight later a fourth attack. After this last attack she was confined to bed for seven weeks. During this time she had increasing difficulty in defæcation and micturition, and increasing pain in the back. She then became constantly sick, vomiting everything. At no time were her breasts enlarged or tender. After the first severe flooding she became very weak; but she did not at any time exhibit signs of internal hæmorrhage.

When I saw her at Atherstone she was apparently in good health. The breasts were not enlarged, and contained no milk. On examining the abdomen, there was felt rising out of the pelvis a soft rounded irregular swelling, reaching half-way to the umbilicus. It was elastic, and evidently cystic. It was not tender, and exhibited no intermittent contractions; on auscultation, nothing could be heard. *Per vaginam*, the uterus was felt to be enlarged and pushed forward against the pubes by a tense globular cyst, which distended the pouch of Douglas, and bulged downwards into the vagina, and backwards into the hollow of the sacrum. It was not tender, and was easily outlined. No pulsating vessels could be felt over it; no *ballotement* could be detected. The enlarged hard fundus could be felt bimanually just above the pubes. The cervix was patulous, but not softened. *Per rectum*, a tense cystic mass could be felt in front.

It will be observed that the history was characteristic of a ruptured ectopic gestation; the physical signs were those of an ovarian cyst.

In favour of the diagnosis of an ectopic gestation were (1) five weeks' amenorrhœa followed by (2) recurrent attacks of paroxysmal pain, (3) metrorrhagia, (4) the passage of a decidua, and (5) the development of an elastic tumour in the pelvis.

In favour of it being an ovarian tumour were (1) the fact

that the tumour had all the physical signs of an ovarian cyst, (2) the absence of breast changes and of softening of the cervix, (3) no distinct history pointing to internal hæmorrhage.

Mr. Lawson Tait opened the abdomen on June 22, 1892, and exposed a cystoma growing from the left ovary. This was tapped, emptied, delivered, and removed *secundum artem*. Below it, and forming the tensor swelling felt *per vaginam*, was a double mass, which proved to be a ruptured ectopic gestation—in the abdominal end of the right Fallopian tube—and a cystoma of the right ovary. The Fallopian pregnancy had evidently ruptured some weeks previously, as shown by the quantity of old bloodclot free in the peritoneal cavity. This complex swelling was removed with some difficulty. The abdomen was then irrigated with warm water, a drainage tube inserted, and the wound closed. The patient made a speedy recovery, and returned home on the 20th day.

The specimens removed consist of (1) the left ovary and tube, the ovary being the seat of a cystoma as large as a cocoa nut, the tube being healthy. (2) An ectopic pregnancy in the right tube near the abdominal end, ruptured. Distinct placental tissue infiltrated with blood. No trace of a fœtus. (3) A cystoma of the right ovary as large as a baby's head.

The tubal pregnancy was thus sandwiched between two ovarian cysts.

UTERINE.

TETANUS AFTER OPERATION FOR LACERATED CERVIX.

In a paper read at the meeting of the American Society of Obstetricians and Gynæcologists, Dr. EDWIN WALKER reported a case of the above nature. It was one in which "Emmet's operation" had been done, silkworm gut being used and the usual aseptic precautions taken. On the fourth day the temperature rose to 103° with no indications in the wound of trouble there, so the rise in temperature was attributed to malaria. Quinine lowered the temperature, and on the

seventh day the thermometer registered $99\frac{3}{4}^{\circ}$, with a pulse of 66. Then she complained of stiffness of the muscles of the face and neck. On the eighth day the case was marked, and in the morning of the ninth day convulsions set in and the woman died that night. Morphia was used to quiet the patient. The probable cause of the tetanus was charged to sepsis, and the point of infection to the finger, which was placed in the rectum during the placing of the sutures, infecting the wound later.

CARCINOMA AND FIBRO-MYOMA OF THE UTERUS.

EHRENDORFER (*Archiv für Gynäkologie*, Bd. xlii., Heft 2) has carefully examined the evidence on this disputed subject, and arrives at the following conclusions: 1. The association of cancer and fibro-myoma of the corpus uteri is less rare than has been heretofore supposed, and its clinical importance should be recognised. 2. In every case of hysteromyomectomy, before treating the stump, the specimen should be examined to see if the endometrium has undergone cancerous degeneration. 3. If cancer is found in addition to the fibro-myoma, or even if the former is suspected, complete extirpation should be practised. 4. No method of treating the stump after hysteromyomectomy (even by excision and cauterisation of the cervical mucosa) can promise entire immunity from recurrence under these circumstances. 5. If in a case of fibroid uterus there is a watery, sanguineous discharge, accompanied with severe colicky pains (especially at the climacteric), the development of malignant degeneration of the corporeal endometrium should at once be suspected, and a radical operation should be performed.

PRIMARY CANCEROUS DEGENERATION OF UTERINE FIBRO-MYOMATA.

EHRENDORFER (*Centralblatt für Gynäkologie*, 1892, No. 27) reports a case of this nature, the existence of which was formerly denied by competent pathologists, even by Gusserow. The development of cancer in this connection

may be referred either to the endometrium covering the fibro-myoma, or to a change in its internal structure. In the former case, the disease is doubtless due to the presence of chronic hyperplastic endometritis, the hypertrophied glands growing downward into the substance of the tumour, as in cases reported by Buhl and Hofmeier. These are to be carefully distinguished from such a case as that described by Ruge and Veit, in which cancerous degeneration of a myoma was clearly secondary to malignant disease of the endometrium. Klob and Gläser describe cases of true carcinomatous degeneration of the fibro-muscular tissue, to which class belongs that reported by the writer. Others have been reported by Buhl and Galalien.

RETRO-PERITONEAL TREATMENT OF THE STUMP AFTER SUPRA-PUBIC AMPUTATION.

JOHANNOVSKY (*Archiv für Gynäkologie*, Band xlii., Heft 2) regards Chrobak's method as the ideal one. He reports five successful cases, two of hysteromyomectomy and three of Porro's operation, in all of which the cervix was preserved but was treated extra-peritoneally. Chrobak (who has had seventeen successful cases) has described his method at length, its essential feature being the fact that two peritoneal flaps are dissected from the anterior and posterior surface of the tumour, which are afterwards united over the surface of the stump, drainage being secured by carrying a strip of iodoform gauze down through the cervical canal into the vagina. Johannovsky thinks that in cases of Porro's operation, in which the uterus has become infected, it would be better to remove the entire uterus and drain *per vaginam*, not closing the peritoneal wound.

ALBERT (*Wiener med. Presse*, 1892, No. 29) credits Goffe and Dudley, of New York, with priority in the conception, if not in the exact technique, of this operation. Albert has himself modified the method of treating the stump as follows: After ligating the upper portions of the broad ligaments the

mass of the tumour is removed, the cervical canal is cauterised, tamponed with gauze, and temporarily sutured. The stump is then shelled out of its peritoneal covering as low as the level of the uterine arteries, which are tied and the entire supra-vaginal portion of the stump is excised. There is left a pouch of peritoneum, at the bottom of which is the small remaining portion of the cervix; this pouch is sutured into the lower angle of the wound (being carefully united to the parietal peritoneum), and is drained in the usual manner from above, which drainage may also be maintained *per vaginam* through the cervical canal.

HYSTERECTOMY FOR FIBROID TUMOURS—PÉAN'S METHOD.

PÉAN (*Gazette de Gynécologie*, August 1, 1892) claims to have reduced the technique to the simplest form by pursuing the following method: The tumour is constricted with a rubber cord as near to the cervix as possible, and the mass is removed; if there are several lobes, each is constricted separately and removed. It is not always necessary to dissect away the bladder and rectum from above, but this may readily be done. The stump is now encircled by a wire, is trimmed down as much as possible (sparing its serous covering), and the abdominal wound is closed. The stump, with the wire, is then removed *per vaginam*, the broad ligaments being secured with forceps.

COMBINED TUBERCULOUS AND GONORRHOÆAL ENDOMETRITIS.

SAULMANN (*Centralblatt für Gynakologie*, 1892, No. 27) reports the case of a young woman with purulent endometritis, who suffered from severe shooting pains in the lower part of the abdomen. A drop of pus from the cervix was found to contain tubercle-bacilli as well as gonococci. Under the use of vigorous anti-specific treatment (vaginal irrigation with 4 per cent. solution of nitrate of silver and intra-uterine applications of corrosive sublimate, and chloride of zinc solutions) the gonococci diminished in number and finally dis-

appeared, but the tubercle-bacilli remained unchanged. There were no evidences of pulmonary disease. The writer cites this case as an evidence of the valuable aid afforded by the microscope in the diagnosis of the origin of uterine discharges, the intractable varieties of which will usually be found to contain specific micro-organisms. In the case reported salpingotomy alone would not have been sufficient to eliminate the tuberculous focus, which was in the uterus as well as in the tubes, but hysterectomy was also indicated.

THE TREATMENT OF INOPERABLE CARCINOMA BY INJECTIONS OF ALCOHOL.

SCHRAMM (*Centralblatt für Gynäkologie*, 1892, No. 31), adopting Schulz's suggestion, practised deep injections of alcohol in severe cases of cancer of the cervix uteri, but was obliged to abandon the treatment on account of the unbearable pain which they occasioned. Although the hæmorrhage ceased in some instances during the treatment, there was no change either in the appearance of the diseased parts or in the amount of foul discharge.

VAGINAL HYSTERECTOMY.

TERRIER and HARTMANN (*Revue de Chirurgie*, 1892, No. 4) draw the following deductions from thirty-six cases of vaginal extirpation: (1) Their mortality was 23 per cent. (2) They regard the operation as quite as justifiable as any operation for the complete removal of a malignant neoplasm, and no more dangerous. (3) Recurrence occurred in 70 per cent. of the cases, while the remaining 30 per cent. seemed to be permanently cured.

HYPERTROPHIC ENDOMETRITIS.

TREUB (*Centralblatt für Gynäkologie*, 1892, No. 42) properly emphasises the fact, too little recognised, that this condition is not of inflammatory origin. It should be regarded as simply an hypertrophy of the endometrium

for reasons both anatomical and clinical. Anatomically, it appears as an hypertrophy of either the glands or interstitial tissue, but infiltration with leucocytes is never observed, unless a true endometritis co-exists with the hypertrophy when the latter will be found to be limited to the cervical mucosa. Clinically, this condition of hypertrophy is never attended with inflammatory symptoms; menorrhagia, with rarely a profuse watery discharge, accompanied with more or less severe pain, being the only indications of an abnormal state of the endometrium. The fact that it is such a common accompaniment of subinvolution, retroflexion, fibromyoma, and cancer of the cervix, shows that it is due purely to disturbances of circulation. It is never the primary result of infection.

MYOMOTOMY.

TIPJAKOFF (*Centralblatt für Gynäkologie*, 1892, No. 42) reports twelve successful cases of supra-vaginal amputation for fibro-myomata. He cures the uterine cavity the day before the operation, irrigates with tincture of iodine, and tampons the vagina with iodoform gauze, the latter being replaced just before operation. After removing the tumour, the cervical canal is disinfected with a 10 per cent. solution of carbolic acid, and the surface of the stump, after being trimmed out in the centre, is treated with iodoform and ether, after which its opposed surfaces are united with a continuous silk suture. Finally, the peritoneal flaps are united over the stump in such a way that the line of suture shall not lie directly over that of the stump. The rubber cord is only applied until the tumour is excised, the ovarian and uterine arteries having been previously ligated, when the cord is removed and the stump, after being treated as above described, is dropped back into the cavity.

THE ENUCLEATION OF INTRA-UTERINE FIBROIDS PER VAGINAM.

CHROBAK (*Sammlung klin. Vorträge*, No. 43) reports forty-three cases, with one death from hæmorrhage. The

tumours most capable of removal in this way are those growing from the cervix and those projecting into the uterine cavity. The uterus must be movable and the cervix dilatable. If several sub-peritoneal fibroids or diseased adnexa are present at the same time, cœliotomy is preferable. The writer incises the cervix freely if necessary, sometimes ligating the uterine arteries or their lower branches beforehand. He insists that the tumour shall be removed at one sitting, even if the operation is prolonged. After removing the neoplasm he irrigates, and then tampons the uterine cavity with gauze.

THE ABDOMINAL ENUCLEATION OF UTERINE FIBRO-MYOMATA.

CHEVRIER (*Nouv. Arch. d'Obstétr. et de Gynéc.*; *Centralblatt für Gynäkologie*, 1892, No. 40) prefers this method of removing smaller tumours to myomotomy, believing that there is less hæmorrhage, and that the uterine cavity is not opened. The objection that small tumours are overlooked when the entire uterus is not removed does not hold if careful examinations are made before and during the operation. The convalescence is usually rapid and easy. One hundred and twenty-five cases are reported, with a mortality of 16 per cent.

PRIMARY CARCINOMA OF THE CORPUS UTERI.

BISCH (Paris thesis; abstract in *Centralblatt für Gynäkologie*, 1892, No. 34), analyses twenty-seven cases, arriving at the following conclusions: (1) Carcinoma of the uterine body may readily be diagnosed from the clinical symptoms alone, in women who have passed the menopause. (2) If cancer develops from a former endometritis, the persistence of the symptoms originally due to the latter and their resistance to treatment, should awaken a suspicion of malignancy. (3) The microscope is not reliable in doubtful cases, at least for making an early diagnosis. (4) Vaginal

extirpation, if performed early, is a safe operation promising the best results, the abdominal or sacral methods being justifiable only in cases of atresia, or where the uterus is too large to be removed *per vaginam*.

RESECTION OF THE UTERUS IN CASES OF PELVIC SUPPURATION.

LANDAU (*Centralblatt für Gynäkologie*, 1892, No. 35), reports two cases in which he performed the following operation: In order to reach and thoroughly drain a pelvic abscess behind the uterus, he removed piecemeal the cervix and a portion of the body of the organ adjacent to the abscess-cavity—a procedure comparable to resection of the ribs in cases of empyema. Hæmorrhage was controlled by temporary compression with clamps, and there were no unpleasant consequences. Drainage was perfect and the sac rapidly closed. Total extirpation, according to the French method, is more dangerous, whereas in partial resection the peritoneum is not injured.

FIBRO-MYOMA OF THE PELVIC CONNECTIVE TISSUE.

UEROW (*Centralblatt für Gynäkologie*, 1892, No. 48) reports a case of double fibro-myoma, only one other specimen of which has been described by Hofmeier. The patient was forty-four years of age, a VI.-para, and had suffered from pelvic and abdominal pains, prolapse of the pelvic organs, and menorrhagia since the birth of her first child, when she sustained a complete laceration of the perineum. On examination she was found to have marked cystocele, with a pedunculated tumour, the size of a hen's egg, growing from the anterior vaginal wall just behind the right nympha. To the left of the median line there was a second tumour, sessile and covered by the vaginal mucous membrane; it could be traced upward into the pelvis behind the ascending ramus of the pubes, behind and to the left of the bladder. In attempting to remove the pedunculated tumour its attachments were

found to be deeper than was supposed, since the pedicle sprang from the connective tissue lying between the cervix uteri, the bladder, and the lateral wall of the pelvis. Enterocele being carefully excluded, the tumour was dissected out, the hæmorrhage being moderate. The other tumour, which was as large as an apple, had no pedicle, and was dissected out from the subperitoneal space between the uterus and bladder, after which posterior colporrhaphy was performed, and the laceration through the sphincter was repaired by Tait's method, the beds of the tumours being previously closed by continuous catgut sutures. The result was entirely satisfactory. It was positively demonstrated that the tumours had no connection with any of the pelvic organs. An examination of the neoplasms showed that they were composed of a basis of connective tissue, in which were bundles of smooth muscle fibres. It was evident that they had sprung from the pelvic connective tissue, and had originally occupied a position within the pelvis, from which they had descended in consequence of the long-standing prolapse of the uterus and vagina. In view of Luschka's observation that smooth muscle fibres are not only normally present in the lower half of the broad ligament, but develop *de novo* in old cases of prolapse, it seems unnecessary to explain their occurrence in the tumours by reference to Cohnheim's embryonic theory.

REMOVAL OF INFECTED FIBROIDS AFTER LABOUR.

HIRST (*Annals of Gynæcology and Pediatrics*, July, 1892). In the first case there were two fibroids of moderate size. They could not offer any mechanical obstruction to labour as they were attached near the fundus. After delivery the woman had symptoms of an infected endometrium, and vigorous measures were required to conquer the septic infection. The fever and signs of systemic infection abated, but there remained some persistent and continuous fever. After six weeks, the fibroids which had been diagnosticated during pregnancy were removed with ease, and two days afterwards the patient had her first normal temperature since.

In the other case the fibroid was very large, reaching from the fundus of the involuted uterus to the umbilicus. Immediately following labour sepsis was present. The operation was not difficult, though there were a good many adhesions to omentum which occasioned free hæmorrhage. Patient recovered perfectly.

He holds such fibroids should be operated on when they become infected, as the low vitality of their growths makes them particularly liable to septic infection.

VAGINAL.

SUPRAVAGINAL HYSTERECTOMY WITHOUT LIGATURE OF THE CERVIX: A NEW METHOD.

B. F. BAER (*American Journal of Obstetrics*, October, 1892) read a paper before the American Gynæcological Society, in which he described a new method of removing the uterus for fibroid tumours. His experience with the method is based upon a series of ten consecutive cases, all of which, except the last (which died of shock) made a quick recovery with no important incidents during convalescence. The method must not be confounded with those of Goffe and Dudley, although in certain respects resembling their devices. The Baer operation consists of passing a single silk ligature through the broad ligament near the cervix, and then transfixing the ligament near its outer surface and tying. In order to prevent reflux from the uterus, a stout pedicle forceps is made to grasp the broad ligament below the tube and ovary, and then the ligament is severed just below the forceps, the incision being carried close to the edge of the tumour. A second ligature may be applied to the broad ligament lower down, if deemed necessary, and the process of ligation and cutting be repeated on the opposite side. The knife is then carried lightly around the tumour an inch or two above the peritoneal reflexion of the bladder in front and behind, and the peritoneum stripped off with a scalpel handle for the purpose of making peritoneal flaps. The next step is the ligation

of the uterine arteries. This most important matter is accomplished by passing the ligature through the broad ligament, outside of, but close to, the cervix, avoiding the ureters. The uterus is then amputated, and the stump (trimmed and made as small as possible) immediately recedes upon being released, and is buried out of sight by the peritoneal flaps which cover it like elastic bands. The peritoneal flaps are united by Lembert sutures, if necessary. The cervix is thus allowed to resume its natural position and is devoid of a single ligature or suture in its tissues. Nothing whatever is done to the cervical canal. Nor has the author found it necessary to use the temporary elastic ligature about the cervix. The author believes his method of operating comes as near being technically correct as possible, for the following reasons:—

(1) It secures against hæmorrhage, because the blood-vessels are ligated outside the muscular tissue of the cervix; and against sloughing, because these tissues are entirely free from a constricting ligature.

(2) It removes all of the supravaginal tissue, without opening the vagina, thus allowing the cervix to remain attached and *in situ*, to maintain its position as the keystone of the arch, and preserve the strength and anatomical shape of the lower part of the abdominal cavity.

(3) The raw end of the stump is in contact with the raw surfaces of the surrounding structures, deep in the pelvis and covered by the raw edges of the peritoneal flaps which press firmly upon these tissues and immediate union doubtless occurs.

(4) The danger of contamination from sloughing pedicle, open vagina or drainage tube does not exist.

(5) The anatomical relations of the parts are not so disturbed as in other operations, and the dangers of hernia, fistula and other unpleasant sequelæ are absent.

APHTHÆ VULVARIS.

GIULINI communicates to the *Centralblatt für Gynæcologie* an interesting case of aphthæ of the vulva. The

patient was 24 years of age and between the second and third months of pregnancy. Two months before the beginning of her illness one of her children had thrush of the mouth. The patient was suddenly attacked with burning and itching of the vulva, which grew into intense pain. There was swelling of the labia majora and minora; the mucous membrane of the latter was very much reddened and covered with white, insular spots, which were easily removable with cotton, exposing very superficial solutions of continuity in the epithelial layer. There was a yellow, somewhat thick discharge from the vagina.

Despite the application of a 2 per cent. sulphate of zinc carbolated solution, the vulva and part of the vagina on the following day were entirely covered with thick, felt-like masses in membranous layers. There was considerable fever, swelling of the vulva, and burning on urination.

The layers, upon being examined microscopically, proved to be aphthæ.

Cloths soaked in acetate of lead solution and vaginal injections of carbolated lime water were followed by improvement in the swelling and reduction of the fungus patches.

Doubtless the membranes relaxed by pregnancy gave a favourable soil for the development of aphtha.

RECTAL.

RECTAL GONORRHŒA.

FRITSCH (*Centralblatt für Gynäkologie*, 1892, No. 34), calls attention to the obstinate character of gonorrhœal proctitis, and reports a case in which, after six months' treatment, gonococci were still found in the discharge. An examination *post-mortem* showed numerous ulcers. The entire mucosa was filled with cocci, lying mostly within the leucocytes, which surrounded Lieberkuhn's glands; the sub-mucosa was not invaded. The writer thinks that many supposed syphilitic ulcers of the rectum of obscure origin are really to be attributed to chronic gonorrhœa.

GONORRHOËAL PERITONITIS IN THE FEMALE.

An interesting editorial on this subject (based upon a recent thesis of CHARRIER'S) in the *Gazette hebdomadaire de Médecine et de Chirurgie*, 1892, No. 39), gives the following conclusions: The continuity of the external and internal genital tract in the female renders her peculiarly liable to ascending specific infection. Two forms of peritonitis are peculiar to the sex—puerperal (identical with which is the septic form following impure traumatism) and specific, or gonorrhœal, characterised by a localised plastic exudate; the *streptococcus pyogenes* is peculiar to the former septic variety, while the gonococci are characteristic of specific infection. The latter variety of peritonitis may be characterised as "remittent," its exacerbations being coincident with menstruation and sexual excesses. It was formerly described as pelvic peritonitis due to menstrual congestion. In addition to the puerperal, or streptococcus, and the venereal, or gonococcus, varieties there is an intermediate form (*puerpero gonorrhéique*), which combines the symptoms and lesions of both. It is extremely important to recognise the presence of perimetro-salpingitis during the course of gonorrhœa; in fact, the liability to such a complication should lead us to treat vigorously the slightest manifestations of incipient infection. Gonorrhœal endometritis, above all the latent form located in the cervix, should receive especial attention; injections of tincture of iodine and of a 1 per cent. solution of permanganate of potassium are particularly efficacious.

OBSTETRICS.

THE *University Medical Magazine* for January, 1893, quotes the following items:—

ASSAFŒTIDA IN HABITUAL ABORTION.

TURAZZO (*Centralblatt für Gynäkologie*, 1892, No. 8), recommends the use of assafœtida during pregnancy in cases of habitual abortion. He places the patient, as soon as preg-

nancy has been diagnosed, upon one and a-half grain pills of assafoetida, administered twice daily, gradually increasing the dose to ten pills a day. The treatment is continued during pregnancy, the daily dose being gradually decreased. Turazzo has thus successfully carried to term three cases of frequent abortion, one of which had aborted twice and two five times each. A case of threatened abortion of the sixth month was also brought to term.

ROSENSTEIN, of Breslau (*Centralblatt für Gynäkologie*, No. 41, 1892), reports the following case of rupture of the ovary interesting in its diagnosis from rupture of an extra-uterine foetal sac. The patient, aged 25 years, had recently borne and suckled her first child. When first seen by Rosenstein she had violent pain, with free vomiting, and was slightly collapsed. There had been suppression of menses for five months, and she believed herself to be pregnant. After a few days the pain and vomiting ceased. A tumour, resembling the uterus at the fifth month of pregnancy was detected. The body and limbs of the foetus were so distinctly felt, however, that they seemed as though free in the abdominal cavity immediately under the parieties. On the following day sensations like labour pains were experienced, and the abdomen became greatly distended. Two weeks later a sound was passed and touched a foetus. There was no hæmorrhage or escape of liquor amnii following. The distension increasing, Rosenstein operated a week later removing a half-solid, half-cystic tumour of the right ovary, having two large holes with smooth surfaces on its outer wall, from which colloid matter was freely escaping into the peritoneum. The omentum was œdematous and strongly adherent.

On the night following the operation the patient was safely delivered of a six months' female child, which died after a few inspiratory efforts.

The chief distinguishing features of this case from rupture of a foetal sac, were :

(1) The absence of any sign of severe internal hæmorrhage and of the discharge of decidua with flooding.

(2) The swelling at first hard becoming soft ; had it been effused blood the contrary would have occurred.

The tumor was a papillomatous adeno-carcinoma.

FOETAL HEAD RETAINED OVER THREE MONTHS
IN THE UTERUS.

LOISNEL (*Nouvelles Archives d'Obstétrique et de Gynécologie*, May, 1892), describes the following extraordinary case which came under his observation :—In November of last year, Dr. Notta was called to attend a woman who had felt labour pains at term three months before. She was a III.-para, her previous labours resulting in spontaneous delivery. The doctor attempted turning, and failing, amputated a leg. On the day following he cut off the other leg. Next day he decapitated and removed the trunk and arms. Antiseptic injections were prescribed, but through ignorance of the patient, were not given. The woman resumed her work, but was annoyed by the lochia continuing longer than usual. The doctor found a vesico-uterine fistula and a solid body occupying the uterus. He extracted a piece of maxilla by the aid of forceps. The patient was then admitted to a hospital. The os was dilated and the foetal skull removed in pieces. There had been up to this time no signs of septicæmia. Afterward there was an occasional rise of temperature during recovery. The vesico-uterine fistula closed, but a communication established itself between the rectum and genital tract.

OVARIOTOMY DURING PREGNANCY.

DSIRNE (*Archiv. für Gynäkologie*, Band xxiv., Heft 3) has collected 135 cases of ovariectomy performed during pregnancy, from the study of which he has drawn the following conclusions :—

(1) The complication of pregnancy with ovarian tumour is to be considered a very grave occurrence in which, with few exceptions, the extirpation of the tumour comes into question.

(2) The further pregnancy progresses, the more dangerous is the situation for mother and product.

(3) The puncture of ovarian cysts and the production of abortion are to be considered only in emergency.

(4) Ovariectomy gives the best results for the mother in the second, third and fourth months of pregnancy; for the product of conception in the third and fourth.

(5) If an early ovariectomy is not possible from various reasons, it is to be carried out in the later months of pregnancy, as good results can even then be expected.

ANALYSIS OF TWENTY-FIVE CASES OF HYDATIDIFORM MOLES.

CRAIGIN (*Boston Medical and Surgical Journal*, vol. cxxvii., No. 10), has analysed twenty-five cases of recently reported mole pregnancy, from which he has deduced the following points: (1) Primiparæ are but rarely affected; and the average age is younger than is generally estimated; (2) there may be present any of the ordinary changes of breast, labia, &c., found in normal pregnancy; (3) there is medico-legal importance in the following: (*a*) origin from impregnated ovum only; (*b*) the placenta thus formed is nearer the seat of the myxomatous change; (*c*) the mole may be carried beyond term or after a living child; (*d*) the appearances after delivery of a mole may be indistinguishable from those after childbirths; (4) reflex symptoms of nausea and vomiting common to pregnancy, so far from being absent or rare, are rather frequent, and as a rule are early, severe, progressive; (5) there may be œdema without albuminuria. Schul, who has recently made a study of the relation of albuminuria to hydatidiform mole, finds that while it does not occur oftener it generally appears earlier than in normal pregnancy; (6) uræmia may be a complication, and with convulsions is amenable to the same treatment as in pregnancy; (7) too much stress has been laid on the so-called characteristic discharge of thin watery blood, with occasional cysts. For while in the cases cited the flow may not have been pure

blood, it was so nearly that in a large proportion of cases, that no distinction was noted. Therefore, any vaginal discharge, watery or bloody, slight or considerable in amount intermittent or constant and without cysts, is perfectly consistent with hydatidiform mole; (8) sudden hæmorrhage, sufficient to cause grave general symptoms is frequent; as is also an exhausting intermittent flow.

The American Journal of the Medical Sciences for October has the following excerpts:—

SYMPHYSIOTOMY.

CHARPENTIER (in the *Nouvelle Archives d'Obstétrique et de Gynécologie*, 1892, Nos. 5 and 6) reviews the literature of the subject, which is chiefly Italian. So far as primary results are concerned, Spinelli's twenty-four operations resulted in the saving of all the mothers, and of twenty-three of the twenty-four children. The operation is performed under antiseptic precautions, the cutaneous incision is closed with catgut and dressed with bichloride gauze. After delivery the patient has three vaginal douches daily, at first of bichloride of mercury solution 1 to 2000, afterwards 1 to 4000. The pubes are firmly united in from a month to six weeks, and during that time the patient remains in bed and wears a firm bandage. No case of permanent non-union is reported, the pubes being commonly strongly knit together.

The operation is indicated in cases of the pelvis not so highly contracted that a living foetus cannot be afterwards delivered by version, or, preferably, the forceps. In very highly contracted pelvis it is not indicated. Symphysiotomy is advantageous in patients at term with a living child in whom the true conjugate of the pelvic brim measures from three and one-third to two and three-quarter inches. When the pelvic diameter is smaller than that, the Cæsarean section or embryotomy should be performed. Symphysiotomy and induced labour are sometimes successful when the pelvis is smaller than the dimensions given.

PERFORATION OF THE AFTER-COMING HEAD.

WINTERNITZ (*Centralblatt für Gynakologie*, 1892, No. 28) recently encountered the case of a patient who had borne four children in difficult labours. She had a symmetrically contracted pelvis, whose true conjugate was three inches. Her child was large, and lay in breech presentation. The body was delivered with difficulty, the head could not be born. It was impossible, from lack of space, to use Smellie's scissors. Decapitation was performed, and the head was turned, by supra-pubic pressure, so that the occiput presented. It was fixed by external pressure and perforated, the brain broken up and evacuated with the finger, and the head delivered by the cranioclast. During the delivery sudden free hæmorrhage followed the premature separation of the placenta. The placenta was easily delivered, the uterus and vagina douched. The patient had a normal puerperium.

RUPTURE OF THE UTERUS DURING ABORTION.

HEKTOEN (*American Journal of Obstetrics*, July, 1892) reports two cases of extraordinary mutilation of the uterus and abdominal organs during the performance of criminal abortion. In one a rubber catheter had been inserted in a uterus three and a-half months pregnant, and the foetus had been expelled. The abortionist then attempted to remove the placenta, scraping the uterus with a sharp spoon and pulling upon what he supposed to be the cord. A physician summoned in consultation found the patient dying, and a loop of intestine protruding from the vagina.

At the *post-mortem* examination it was found that the catheter had perforated the uterus and lodged behind the liver. In attempting to remove the placenta the abortionist had torn open the cervix and pulled down a loop of intestine.

In the second case a midwife attempted to remove the placenta after spontaneous abortion at four months, by pulling upon the cord. Peritonitis ensued, and a physician curetted the uterus with a dull wire curette. Only half of the intra-

uterine douche which was given returned. The patient died twenty-six hours afterwards.

At a *post-mortem* examination the fundus of the uterus was found to have largely disappeared. The most probable explanation of the case is that the midwife produced partial inversion of the uterus by pulling upon the cord, and then gouged off the uterine tissue, supposing it to be the placenta. There is no reason to believe that the dull wire curette in the hands of the physician had anything to do with the rupture of the uterus.

ABDOMINAL PREGNANCY.

In the *Zeitschrift für Geburtshülfe und Gynäkologie* (Band xxiv., Heft 1), SUTUGIN reports two cases of abdominal pregnancy with full *post-mortem* notes and microscopic examination of specimens. He concludes from his observation of such cases that they occasionally go to term. In early pregnancy they closely simulate intra-uterine pregnancy. Symptoms of compression of the bowel and urethra are manifest earlier than in other kinds of ectopic pregnancy. When the placenta is behind the uterus, severe pelvic and sacral pain is felt. The diagnosis is made by a tumour behind the uterus; in the second half of pregnancy a round cystic tumour is found in the abdomen, in which foetal parts can be felt; in front of the tumour is the uterus. Heart sounds may be heard, but not placental souffle, as in tubo-abdominal pregnancy. It is unusual for contractions in the foetal sac to be felt. The vagina is found encroached upon by an elastic compressible tumour resembling a placenta to the touch. The vagina is elongated; the cervix is high up; the uterus is enlarged.

When rupture of the sac and bleeding occur, Douglas's pouch should be opened at once. When the foetus is viable or has perished some time previously, abdominal section is indicated.

INTRA-UTERINE INJECTIONS OF GLYCERIN TO PROMOTE
THE PAINS OF LABOUR.

PELZER (in the *Archiv für Gynäkologie*, Band. xlii., Heft 2), reports four cases of lingering labour in which intra-uterine injections of glycerin were employed to increase the vigour of uterine contractions. A suitable syringe is filled with glycerin and connected by a rubber tube with an intra-uterine catheter. Air is carefully expelled from the catheter, which is then introduced as far as possible upon the posterior wall of the uterus, and within the os and cervix. Several ounces of glycerin are injected; to prevent its speedy expulsion, the patient is put upon the side in Sim's position, or in the knee-chest position.

ECTOPIC GESTATION, WITH THE BIRTH OF A VIABLE
CHILD BY ABDOMINAL SECTION.

BOKELMANN reports (*Centralblatt für Gynäkologie*, 1892, No. 46), the case of a multipara who had ectopic gestation. The pregnancy was intra-ligamentary, and foetal movements and heart-sounds were plainly perceived. Signs of foetal death appeared, the patient lost flesh and strength, and suffered from rise of temperature. Abdominal section was performed, the foetal sac stitched to the abdominal wall, and the foetus removed. The sac was irrigated with 4 per cent. solution of boric acid, powdered with benzoate of sodium, and tamponed with iodoform gauze. Uninterrupted recovery followed.

In the same journal, VEIT reports ectopic gestation with total extirpation of the foetal sac and rupture of the mesocolon through extensive adhesions. The lesions were repaired by catgut, and the patient made a good recovery. In discussing this case, OLSHAUSEN remarked that the belief commonly held that interference with the mesentery will result in gangrene of the intestine is without foundation; in his own experience he had seen *post-mortem* examinations on two patients dying the sixth and seventh day after abdominal

operations, in which the mesentery was extensively injured ; in neither case was gangrene of the intestine present. MARTIN added his testimony to the truth of what Olshausen had stated, namely, that a considerable portion of intestine can be separated from its mesentery without interfering with its nutrition. SCHLANGE thought that gangrene of the intestine depended more upon peritonitis than upon separation of the mesentery.

RETROFLEXION OF THE PREGNANT UTERUS FOLLOWED
BY GANGRENE OF THE BLADDER.

LANDFERMANN (in an Inaugural Dissertation, Bonn, 1892) reports the case of a primipara suffering from retroflexion of the pregnant uterus. Reposition was easily performed ; during the following night the patient aborted spontaneously ; the placenta was delivered with difficulty, and its removal was accompanied with a discharge of offensive urine from the uterus. The patient continued to discharge pieces of necrotic tissue coming from the bladder through the vesico-uterine fistula. Under irrigation with boric acid solution the parts gradually healed, and the incontinence disappeared. Microscopic examinations of the specimens discharged showed them to come from the mucous membrane of the bladder.

CHOLERA DURING PREGNANCY.

KLAUTSCH (in the *Münchener medicinische Wochenschrift*, 1892, No. 48) reports ten cases of cholera occurring in pregnant women. One of these patients was in the second month of pregnancy, one in the third, two in the fifth, one in the seventh, four in the eighth, and one in the ninth month. One patient died undelivered ; one perished after incomplete abortion at the second month ; three died after premature labour in the fifth and eighth months. Three patients were discharged undelivered, the foetus remaining alive. One patient recovered after the birth of an eight months' foetus,

and one patient recovered after the birth of a child at term. The patients showed two stages of the disease : one attended by copious evacuations from the stomach and intestines ; the second, the period of intoxication or asphyxia. The patients were usually taken ill at midnight, or early in the morning ; the injection of saline fluid in the muscles of the thigh relieved the patients of many symptoms of collapse. This temporary relief was soon followed by the development of a typhoid stage characterised by delirium, perspiration, flushed face, and intense activity. A period of the deepest coma followed this stage. In this, the pulse was strong, dicrotic, and the respiration superficial. Hæmorrhage into the conjunctiva was often present, respiration became very irregular, and death supervened. In common with Baginsky and Weber, Klautsch could not observe that pregnancy modified the course of cholera in the slightest.

The foetus usually perished in these cases during the stage of intoxication or asphyxia. The mothers usually complained that foetal movements were violent during the first stage of the disease. As causes for foetal death, are given the enormous loss of water, the lessened tension of the circulation, and impaired respiration following the profuse discharges of the mother. Slaviansky has also shown that the epithelium of the placenta is extensively impaired, that hæmorrhages occur in the placenta, and that premature separation of the placenta as reported by Tipjakoff is also present. Bacteriological examination of the foetus in these cases, made in Hamburg by Simmonds, failed to reveal the cholera bacilli in the foetus ; that ptomaines and toxine produced by the bacilli may poison the foetus is more than probable.

A further peculiarity in these cases lay in the fact that the foetus remained after death but a short time in the mother's womb ; this was due in part to hæmorrhages in the decidua, and also to the irritable condition of the mother's nervous system. The dead foetus was usually expelled at the end of the stage of asphyxia and the beginning of the stage of typhoid delirium. The birth was characterised by a few

strong pains, followed by failure in the expulsive forces, so that instrumental delivery was frequently necessary. After the delivery of the child, involution proceeded promptly as a rule. In one case, slight *post-partum* hæmorrhage was observed. In this case, it was very difficult to secure good uterine contraction.

The prognosis for the fœtus in cases of pregnancy complicated by cholera is excessively grave. For the mother, the occurrence of pregnancy does not seem to seriously complicate the prognosis of cholera.

As regards treatment, pregnancy was disregarded in selecting therapeutic measures. Calomel was given, intravenous injections of saline fluid, Cantani's method was employed, and excessive vomiting was treated by all available means. As a stimulant, camphor was given, either in oil or combined with alcoholics and with tea and brandy. Mild albuminoid foods were employed.

On the other hand, GALLIARD (in the *Gazette Hebdomadaire*, 1892, No. 46) reports ten cases of cholera attacking nursing women, and was inclined, from a study of these cases, to the belief that the condition of lactation renders more favourable the course of the acute disorder. He finds that among the ten cases, 50 per cent. recovered, whereas in general among pregnant women, not more than 33 per cent. survived the cholera. Examination of his records shows that his patients were treated by lactic acid, by intravenous transfusion, and by stimulants. In some of the cases the supply of milk failed for a short time, but was re-established. In other cases the breasts became painfully engorged, while others suffered from a papular erythema. In none of the cases which recovered was the secretion of milk permanently arrested.

SYPHILIS AND ECLAMPSIA.

LANG (in the *Archives de Tocologie*, 1892, No. 11) concludes a study upon this subject as follows: Syphilis predisposes to albuminuria and nephritis, and hence pregnant women who are syphilitic suffer more frequently from albumin-

uria. It has been found to be a predisposing and aggravating cause of eclampsia. Lang supports these conclusions by an extensive survey of the literature of the question, in which he finds that while in pregnant women in general $3\frac{4}{10}$ per cent. have a simple albuminuria, in pregnant syphilitic women $5\frac{1}{100}$ per cent. suffer in this way. In general $1\frac{5}{10}$ per cent. of all pregnant women have albuminuria and tube-casts, while the same are found in $2\frac{1}{2}$ per cent. of pregnant syphilitic women. While 88 per cent. of pregnant women having albuminuria and tube-casts suffer from eclampsia, 96 per cent. of pregnant syphilitic women having tube-casts and albumen are attacked by eclampsia.

THE TOXITY OF BLOOD SERUM FROM WOMEN SUFFERING FROM PUERPERAL ECLAMPSIA.

TARNIER and CHAMBRELENT (*Annales de Gynécologie*, November, 1892), in a series of six cases of eclampsia, have investigated the toxicity of blood serum. The conclusions reached by them show that the blood serum of such patients is decidedly poisonous, and that its poisonous quality is in inverse ratio with that of the urine of such patients. There was no reason to suppose that the poisonous properties of the blood serum depended at all upon drugs given to these patients. A prognosis as to the gravity of a case of eclampsia may be based upon an investigation into the properties of the blood serum of the patient.

THE INFLUENCE OF QUININE UPON THE MILK AND UPON THE CHILD OF THE NURSING MOTHER.

OUI (in the *Archives de Gynécologie*, November, 1892) reports the results of his study as to the effect of quinine upon the milk of the nursing mother and the health of her child. He finds that, even given in free doses, it does not affect the milk, and has no unfavourable influence upon the health and well-being of the child.

TUBAL MOLES AND TUBAL ABORTIONS.

SUTTON (in the *Medical Press*, 1892, No. 2793) describes, in a well-illustrated paper, tubal moles. They differ from uterine moles in several particulars. The uterine mole is more or less spherical, the amniotic cavity is of fair size, and occupies the centre of the mole. The embryo may or may not be present. It is very misshapen when recognised, and the umbilical cord is often œdematous.

A tubal mole in its early stage is spherical, but later becomes ovoid; in most cases the amniotic cavity is excentric. The amnion is easily ruptured, and permits the escape of the embryo. This explains the difficulty of finding the embryo where the mole has been discharged through a rent in the wall of the tube, or through a closed ostium with hæmorrhage. The mole is found in the clot, and the embryo can be found, if all the blood be collected and the clots carefully washed. In hard, firm clots, in which no amniotic cavity is recognised, the specimen must be cut in sections and examined for villi of the chorion. This part in sections has clusters of circular bodies occurring in groups. Under a low power, they show an external layer of epithelial-like cells with irregular cells in the centre. Under a high power, the epithelium becomes distinct. The presence of a tubal mole is decisive proof of pregnancy. Blood and blood-clots, however, may be found in the tube when pregnancy is absent. Accurately speaking, the term "hæmato-salpinx" should be applied to a non-gravid Fallopian tube distended with blood secondary to occlusion of the abdominal portion of the tube.

By "tubal abortion," we understand the discharge of an ovum through the ostium into the peritoneal cavity, or by rupture of the tube when the ostium is closed. Hæmorrhage is usually more abundant in tubal abortion than where the tube ruptures and the ovum escapes into the broad ligament. The uterine decidua are usually discharged at the time of the tubal abortion. Sutton concludes his observations as follows :

"(1) The transformation of a tubal ovum into a mole or apoplectic ovum is beyond doubt. (2) The majority of specimens described as examples of hæmato-salpinx are gravid tubes. (3) Rupture of a gravid tube and tubal abortion are the common causes of pelvic hæmatocele. (4) Mesometric rupture of a gravid tube is a common cause of pelvic hæmatoma. (5) To affirm that bands of fibrin resemble chorionic villi indicates great want of histological knowledge. (6) Every clot of blood found in a Fallopian tube is not a tubal mole."

PLACENTA PRÆVIA COMPLICATED BY RIGIDITY OF THE
NECK OF THE UTERUS; INCISION OF THE NECK;
RECOVERY.

The method of treating delayed labour from rigidity of the neck of the uterus, which has been recently advocated by Dührssen and others, was exemplified in a case reported by COEN in the *Nouvelles Archives d'Obstétrique et de Gynécologie*, 1892, No. 11. The patient was a primipara, five months pregnant. She had already suffered from severe hæmorrhage. She was at once taken to the hospital, where examination disclosed placenta prævia. Under thorough antiseptic precautions, the Simon speculum was introduced, the cervix uteri grasped with tenaculum forceps, and two lateral incisions, extending to the vaginal junction, were made. The fœtus and placenta were removed, the uterus douched with an antiseptic solution, the incisions closed with catgut, and the uterus tamponed with iodoform gauze. An uninterrupted recovery ensued. The patient was subsequently examined, when it was found that the parts had healed perfectly. She was recovering from her condition of anæmia.

A FATAL CASE OF PUERPERAL SEPSIS, ILLUSTRATING THE
MODE OF INFECTION AND THE INFECTIVE AGENT.

BUCHANAN (in the *Glasgow Medical Journal*, December, 1892) describes a fatal case of puerperal sepsis in which death occurred the twenty-fourth day after delivery. Microscopic

examination of the fluids and tissues of the body demonstrated the presence of the *streptococcus pyogenes*. Old adhesions, binding down the right tube and ovary, were present; on the left side, the appendages were matted together, and in the general mass was found the ovarian vein distended with brownish pus. This could be traced to the left corner of the uterus, where many dilated veins joined it. The walls of these venous trunks were yellow and roughened, suggesting pus. The left Fallopian tube was dilated with pus, twisted and coiled upon itself, and had become converted into a series of spaces filled with pus. The uterus was sub-involuted, its internal surface fairly healthy, except the placental site, where an ulcer was present. A probe, passed into the veins on the left side of the uterus, emerged in the ulcer at the placental site. The popliteal and posterior tibial veins of the right leg were blocked by thrombi. The source of the infection was not known. It had evidently been introduced at the placental site, and thence had spread through the veins at once.

GONORRHOËAL OPHTHALMIA OCCURRING IN UTERO.

FEIS reports (*Centralblatt für Gynäkologie*, 1892, No. 45) the case of a multipara in whom tedious labour occurred; a discharge of yellowish-green fluid from the os uteri was present during labour. Fifty-four hours after rupture of the membranes a female child was born spontaneously. Upon examination, double ophthalmia was found present in marked degree. The gonococci were demonstrated in the pus from the eyes; the mother made an uninterrupted recovery, and the child subsequently recovered in an ophthalmic hospital.

RUPTURE OF THE UTERUS.

The *Brooklyn Medical Journal* to which we are indebted for many interesting excerpts, quotes the following:—

WINTER (*Centralblatt für Gynäkologie*, No. 1, 1892) reports the following case of uterine rupture: A rent extended obliquely across the anterior wall, nearly to the os externum,

and was complete. At the autopsy, the uterus was found strongly anteflexed, and the intestines and parietes had already (within twenty-eight hours) formed adhesions about the rent so as to cut it off from the peritoneal cavity. The patient was a multipara, aged 29. After ten hours' active labour the waters broke and the pains ceased. Nine hours later, rupture of the uterus occurred, the head slowly receded from the pelvis, and a trifling amount of hæmorrhage took place. The patient was sent to a lying-in hospital. Winter found that the child had entirely escaped into the abdominal cavity, and lay immediately under the parietes. The temperature was normal, the pulse 124; there was evidence of peritonitis, but not of much hæmorrhage. Winter made a short incision through the abdominal wall and drew out the foetus and placenta. There was little collapse. The symptoms of peritonitis subsided after the operation, but soon reappeared, and the patient died in twenty-eight hours. He submits the following table of thirty-seven cases of rupture of the uterus, with complete escape of the child into the peritoneal cavity;

TREATMENT.	No.	DEATHS.
Died undelivered... ..	5	5
Delivered through the rupture	8	5
Abdominal section after delivery through the rupture	1	1
Abdominal section and delivery through in- cision : no suturing of uterus	12	4
Abdominal section and delivery through in- cision ; suture of uterus	7	5
Porro's operation... ..	4	4
Total	37	24

THE CURE OF OSTEOMALACIA.

VELITS (*Zeitschrift für Geburtshülfe und Gynäkologie*, Band xxiii., 1892), states that formerly 80 per cent. of the cases of puerperal osteomalacia died, and it was not until a few years ago that, in doing a Porro operation in a woman suffering from this disease, it was found that the patient

rapidly recovered from her osteomalacia after the operation. From this Fehling was led to experiment by removing the ovaries. It was found that this operation produced a cure in every case, the excessive and almost unbearable bone pains disappearing in from twenty-four to forty-eight hours.

The examination of the urine and blood has not as yet given any clue as to the cause of this peculiar disease. It is found, however, that during menstruation the general condition becomes much worse. The blood-vessels of the removed appendages, as in pregnancy, are increased in size, though the ovary has not as yet shown any special changes. The pain immediately decreases after the operation.

The fertility of these patients suffering from osteomalacia is greatly increased, probably because of excessive functional activity of the ovary. Even after the disease becomes pronounced, the frequency of conception is remarkable.

Fehling is of the opinion that this disease has its origin in pathologically increased ovarian function, which keeps the vaso-dilators of the bone blood vessels in a continued state of reflex spasm, which in turn produces congestion and the resorption of the bony substance.

Pregnancy is not the only condition producing this disease ; even though it be the result of another cause, castration will still cure it.

This condition is found more especially in certain localities, in Switzerland, Upper Rhine district, and about Vienna. In these districts cretinism is not an uncommon disease. Of twenty-five cases treated by ovariectomy all resulted in cure.—*Therapeutic Gazette.*

THE TREATMENT OF THE MORE SEVERE FORMS OF VOMITING OF PREGNANCY.

ROUTH (*Der Frauenarzt*, March, 1892), states that in seven years' practice he has always been able to arrest the vomiting of pregnancy by brushing the cervix and lower cervical canal with a mixture of equal parts of iodine, iodide of potassium, spirits of wine and water. In general, vomit-

ing ceases immediately after the application. If the vomiting should recur, the cervix should again be brushed. Generally, after this, the vomiting will be permanently relieved.

HÆMATOMA OF THE STERNO-MASTOID MUSCLE IN THE NEWBORN.

In the *Journal of Pathology and Bacteriology*, 1892, vol. i., No. 1, SPENCER reports fifteen cases of hæmatoma of the sterno-mastoid muscle, and gives two excellent illustrations of microscopic sections from these cases. In nearly three hundred autopsies on the newborn, Spencer has met with hæmorrhage into the sterno-mastoid muscle in fifteen cases. So far as the sex was concerned, males and females were affected with equal frequency. The muscles on either side were equally affected. Small and prematurely born children were especially liable to this accident. In fifteen cases, the presentation was either a breech or footling either before or after version. The forceps was used in two cases, and two occurred after spontaneous labour. In one of the latter, however, the head was delivered by pressure with the fingers through the rectum; and in the other, delivery was hastened, as hæmorrhage occurred in the mother. The hæmorrhage was found in the anterior portion of the upper two-thirds of the muscle, the colour of the tumour being dark red, and its consistence firm. Microscopic examination of a transverse section shows the intra-fascicular connective tissue infiltrated with blood; under a high power the blood is seen effused in large amount between the fasciculi. The result of this accident is the formation of fibrous interlacing bands in the muscle, which may cause wry-neck.

THE PATHOLOGY AND PROGNOSIS OF ECLAMPSIA.

In the *Archiv für Gynäkologie*, 1892, Band xlii., Heft 3, DÜHRSEN wrote upon the treatment of eclampsia, basing his recommendations upon the study of some two hundred

cases. In the same journal, Band xliii., Heft 1, he describes these cases in detail, and draws some interesting conclusions from them. He regards the cause of eclampsia to be an intoxication of the blood occasioned by the retention of creatin and creatinin in the kidneys of the pregnant patient; less frequently by an actual nephritis accompanied by congestion of the kidneys, by accumulation of urine through pressure upon the ureters, and by hydro-nephrosis. The creatin and creatinin accumulate in the vessels of the cerebral cortex, producing convulsions by their irritation, and coma. The immediate cause of an outbreak of eclampsia is irritation of sensory nerves in the genital tract, or profound disturbance of the emotional centres. Eclampsia can also be produced by the products of bacteria, and especially when the kidneys are in a congested condition; in other cases, when infective material or bacteria cause extensive disintegration of the red blood-corpuscles, with fatty degeneration of the kidneys, heart muscle, and mucous membrane of the stomach. In the latter cases, fatal gastric hæmorrhage may occur during eclampsia. Prolonged narcosis favours such degenerative changes. In a few cases eclampsia is purely reflex, and is occasioned by abnormal distension of the uterus, or any other violent irritation of the nerves of the genital tract. General susceptibility to nervous impulses may be also a cause, as is seen in very young or very old primiparæ. In an analogous way, the engorgement of the kidneys, producing what is known as the "kidney of pregnancy," results from a reflex contraction of the renal vessels, occasioned by irritation of the genital region.

The prognosis of eclampsia becomes grave in proportion to the number of convulsions; death may occur after but few convulsions from disintegration of the blood, cerebral hæmorrhage, or fatty embolism. In 93.75 per cent. eclampsia ceases after the uterus has been emptied in profound narcosis. Mortality from eclampsia is less after operative emptying of the uterus than after spontaneous labour. The mortality of eclampsia will become still less if operative measures are in-

stituted as soon as the attacks begin. Such should be the treatment at every period of pregnancy. In 80 per cent. of cases of eclampsia, the methods of incisions into the cervix and incisions into the peritoneum and vulva will enable the operator to terminate labour promptly. In 10 per cent. mechanical dilatation by traction upon a kolpeurynter, inserted within the uterus, and accompanied by dilatation by incision will result favourably. Under strict antiseptic precautions the method described, accompanied by the use of the uterine tampon in cases of atony, is no more dangerous than spontaneous labour. Cæsarean section is not indicated for eclampsia. Operative procedures increase the danger in eclamptic cases only when the narcosis is not a deep one. Prolonged narcosis to control convulsions is dangerous, as it favours the occurrence of broncho-pneumonia, increases the disintegration of red blood-corpuscles and the fatty degeneration of vital organs. In eclampsia, where the uterus is greatly distended, death sometimes follows the inhalation of a small amount of chloroform. In these cases, the membranes should be ruptured before the beginning of the narcosis. Chloral, when given internally, becomes chloroform in the blood, and the use of chloral occasions the same dangers that accompany chloroform. Large doses of morphine are also dangerous because of the fatty degeneration of the heart muscle which exists in these cases. Under the operative treatment of eclampsia the maternal mortality should lessen to 25 per cent., and that of viable children to 50 per cent.

NOTES AND NEWS.

BRITISH MEDICAL ASSOCIATION.

SIXTY-FIRST ANNUAL MEETING, NEWCASTLE-ON-TYNE, August 1st, 2nd, 3rd, and 4th, 1893.—Section C. Obstetric medicine and gynæcology. *President*, James Murphy, M.D. ; *Vice-Presidents*, Wm. Gowans, M.D., D. Berry Hart, M.D.—At the next meeting of the British Medical Association, to be held as above mentioned, it has been arranged that in the section of obstetric medicine and gynæcology the following special discussions shall take place:—1. The Conservative Treatment of Diseases of the Uterine Appendages, to be opened by Professor Pozzi, Surgeon to the Lourcine-Pascal Hospital, Paris. 2. Puerperal septicæmia, to be opened by Dr. Robert Barnes, Consulting Physician-Accoucheur, St. George's Hospital, London. In addition to these important discussions and papers from eminent British and foreign obstetricians and gynæcologists, the Council have arranged that one of the three public addresses before the Association, shall this year be devoted to obstetric medicine, and shall be delivered at the general meeting to be held at 11 a.m. on Friday, August 4th, by Dr. C. J. Cullingworth, Obstetric Physician to St. Thomas's Hospital, London. It is anticipated that several practical demonstrations of some of the most recent operations in gynæcology will be given by distinguished operators at the Royal Infirmary, Newcastle-on-Tyne, and at the Infirmary, Sunderland.

THE *Brooklyn Medical Journal* in October, comforted its readers with the following ode on

THE DISGUSTED BACTERIA.

In New York in September,
In a torrid autumn term,
A cholera bacillus
Met a typhus fever germ.

And the latter cried, "Friend 'Cillus,
Why how are you to-day?
I just read in the papers
You were penned up down the bay."

Then 'Cillus winked his other eye,
And said :—" Dear brother 'Phus,
It takes more than a quarantine
To get ahead of us.

"Just because you came from Russia,
And I from Teheran,
Folks think we're just as foolish
As this biped creature, man.

"But now that we are in here,
Let us show this Yankee crew
What hard working foreign emigrants
Like us two sports can do.

"You go over in 'Hell's Kitchen.'
While I stay in 'The Bend,'
And we'll make these people dizzy,
And a jolly time we'll spend."

Then Mr. Typhus answered—
"You have your plans laid pat,
But I fear, dear Cousin 'Cillus,
'That you're talkin' through your hat.

"For a year I've tried to settle
In the swamps or on the ridge,
But the Health Board's kept me a humpin'
From the Battery to the Bridge.

"What with cussid disinfectants,
And their everlastin' stinks,
I haven't had a single sleep
Of more than forty winks.

"I'm goin' back to Europe,
Where the people always give
Hard workin' bacteroids like us
An even chance to live.

"And if your head is level,
You'll grab your coat and grip,
And 'stead of fightin' Yankees
You'll join me for the trip."

Bacillus he was pained indeed,
And said :—"That's sad to hear,
And I think that I'll go with you,
For here comes Microbus Fear.

"He always follows where I go,
And stays where I abide,
And downs a dozen to my one,
Confound his measly hide !

"He grows fat on fumigation,
And boiling he derides ;
At arsenate he snickers,
And just laughs at bi-chlorides.

"You couldn't kill him with a club
He's so almighty tough !
While almost anything downs us,
And that's what I call rough ! "

"Don't worry, 'Cillus," said his friend,
As they sprinted for a ship,
"You'll get the glory, though it's Fear
Who'll make these sinners zip ! "

And so the twain, disgusted,
Departed from our strand,
But left behind Microbus Fear
To ravage all the land !

CLARENCE LADD DAVIS.

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BRITISH GYNÆCOLOGICAL SOCIETY.

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OF THE BRITISH GYNÆCOLOGICAL SOCIETY.**

FOUNDED 1884.

INCORPORATED 1885.

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H.P., Honorary President.
Pres., President.
V.P., Vice-President.
C., Council.
Libr., Librarian.

Treas., Treasurer.
Hon. Sec., Honorary Secretary.
Hon. Loc. Sec., Honorary Local Secretary.
F.F., Foundation Fellow.
L., Life Fellow.

Those marked with an asterisk () have not communicated their address.*

Elected.

- L. 1888 ADAM, GEORGE ROTHWELL, M.B., C.M., Carlton House, Hotham Street East, Melbourne, Victoria, Australia.
- F.F. ADAMS, JOSEPH, M.B., C.M. Edin., Northfield, Warrington.
- 1886 AICKEN, WILLIAM, M.D., 6, Murray's Terrace, Belfast.
- 1888 AIKEN, GEORGE HENRY, M.D., Fresno, California, U.S.A.
- 1886 AIKMAN, ALFRED, M.B., The Elms, Beverley Road, Hull.
- F.F. ALEXANDER, WILLIAM, M.D., F.R.C.S. Eng., 100, Bedford Street, Liverpool. C. 1887-9. V.P. 1890.
- F.F. ALLAN, JAMES, M.A., M.D., *Medical Superintendent Union Infirmary*, Leeds.
- 1886 ALLOWAY, T. JOHNSON, M.D., *Instructor in Gynecology McGill University, Montreal*, 934, Dorchester Street, W. Montreal, Canada.
- F.F. AMBROSE, ROBERT, B.A., L.R.C.P., 1, Mount Place, Whitechapel Road, E.
- 1889 APOSTOLI, Dr., 5, Rue Molière, Paris. V.P. 1893.
- 1885 ARMSTRONG, WILLIAM, M.R.C.S. Eng., Hendham House, Harpurhey, Manchester.
- 1888 ARROL, CHARLES, M.D., C.M. Glas., L.R.C.S. Ed., 12, Edward Street, Bankstone, Sheerness.
- 1889 ASHTON, JAMES T., M.B., C.M., 13, Onslow Crescent, S.W.
- 1888 AUVARD, A., M.D., *Accoucheur des Hopitaux*, 58, Rue la Boétie, Paris. V.P. 1891.
- F.F. AYLING, ARTHUR HENRY WILLIAMS, L.S.A. Lond., 94A, Great Portland Street, W.
- 1889 BAGOT, WILLIAM S., M.D. Dub., L.R.C.S.I., *Gynecologist to St. Luke's Hospital, Denver, Colo., Ex-Senior Assistant Physician Rotunda Hospital, Dublin*, 308 & 309, California Buildings, Denver, Colo., U.S.A.

Elected.

- L. 1888 BAKER, CLARENCE ATWOOD, M.D., 312, Congress Street, Portland, Maine, U.S.A.
- L. 1885 BAKER, WILLIAM HENRY, M.D., *Professor of Gynæcology, Harvard University, Surgeon to the Free Hospital for Women, Boston*, 22, Mount Vernon Street, Boston, Mass., U.S.A.
- 1889 BALDY, J. M., M.D., 330, South Seventeenth Street, Philadelphia, U.S.A.
- 1887 BALLERAY, G. H., M.D., Paterson, N.J.
- L.F.F. BANTOCK, G. GRANVILLE, M.D., F.R.C.S.Ed. *Surgeon to the Samaritan Free Hospital*, 12, Granville Place, Portman Square, w.
V.P. 1884-6. Pres. 1887-8. Treas. 1888-90. C. 1891.
- 1893 BARBER, R. HENRY, L.R.C.P., L.R.C.S., &c., *Professor of Padiatrics and Hygiene in the University of Willamette*, 505, Williams Avenue, Albina, Portland, Oregon, U.S.A.
- L.F.F. BARBOUR, A. H. FREELAND, M.A., B.Sc., M.D., *Assistant to Professor of Midwifery, Edinburgh*, 24, Melville Street, Edinburgh.
C. 1884-8. V.P. 1893.
- F.F. BARBOUR, JAMES, M.D., 118, Newington Causway, s.e.
- F.F. BARNES, ROBERT, M.D., F.R.C.P., *Consulting Obstetric Physician to St. George's Hospital, Consulting Physician to the Chelsea Hospital for Women and the Royal Maternity Charity*, Lingwood, Lyss, Hants.
Hon. Pres. 1884.
- F.F. BARNES, R. S. FANCOURT, M.D., M.R.C.P., *Physician to the Chelsea Hospital for Women, the British Lying-in Hospital, and the Royal Maternity Charity*, 7, Queen Anne Street, w.
Late Editor. Hon. Sec. 1884-86. V.P. 1887-9 & 1892.
- F.F. BARRETT, ALFRED EDWARD, M.R.C.S.Eng., L.S.A.Lond., 24, Addison Terrace, Uxbridge Road, w.
- F.F. BARRETT, HOWARD, M.R.C.S., 3, Tavistock Square, w.c. C. 1889.
- L. 1886 BARRINGTON, HENRY FOURNESS, M.B., C.M., c/o Commercial Bank, Sydney, 18, Birchin Lane, e.c.
- 1887 BARTER, WILLIAM, M.D., M.Ch., M.A.O., 70, Fellows Road, Belsize Park, n.w.
- L. 1885 BATCHELOR, FERDINAND CAMPION, M.D.Dur., M.R.C.S.Eng., L.S.A., L.R.C.P.Ed., *Lecturer on Midwifery and Gynæcology University of Otago*, George street, Dunedin, New Zealand.
- 1888 BATEMAN, A. G., M.B., C.M., 64, Longridge Road, South Kensington, s.w.
- 1888 BATEMAN, FREDERICK AUGUSTUS NEWTON, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A.Lond., 4, Charles Street, St. James's Square, s.w.
- L. 1885 BATTEY, ROBERT, M.D., Rome, Georgia, U.S.A.
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- 1891 BEATTEY, WILLIAM CRUMP, M.D., Jesmond Road, Newcastle-on-Tyne.
- 1892 BECKWITH, F. C., 139, Church Street.
- F.F. BELL, ROBERT, M.D., F.F.P.S.Glasg., *Physician to the Glasgow Institute for Diseases of Women and Children*, 29, Lynedoch Street, Glasgow.
C. 1885-8. V.P. 1891.
- F.F. BENINGTON, ROBERT CREWDSON, M.B., B.S.Dur., *late Demonstrator of Anatomy and Medical Tutor to the University of Durham College of Medicine*, 59, Osborne Road, Newcastle-on-Tyne.
C. 1887-8. V.P. 1892.
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- L. 1885 BIGELOW, HORATIO RIPLEY, M.D., Post Office Box 5104, Boston,
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- L. 1890 BOLDT, H. J., M.D., 245, West 42nd Street, New York, U.S.A.
- 1891 BOURKE, W. H., M.D., 8, Moreton Gardens, s.w.
- 1887 BOURNS, N. WHITELAW, M.D.Brus., M.R.C.S.E., L.R.C.P.Ed.,
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- 1887 BOWIE, ALEX., M.D., C.M., 26, Harley Street, w.
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- L. 1885 BOYD, JAMES P., M.D., *Professor of Obstetrics and Gynecology, Albany
Medical College, Albany, New York, U.S.A.*
- 1891 BRAMWELL, HERBERT, M.D., Allendale Place, Tynemouth, North-
umberland.
- 1886 BRAMWELL, JOHN MILNE, M.B., C.M., Burlington Crescent, Goole,
Yorkshire.
- 1891 BREWIS, N. T., M.B., F.R.C.P., 59, Queen Street, Edinburgh.
- 1891 BRODLEY, MICHAEL MCW., M.D., Jarrow-on-Tyne, Durham.
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- 1892 BROWN, HENRY M., M.D., Hillsboro', Ohio.
- L. 1889 BROWNLEE, MILNE, M.D., Woodstock, Ontario, Canada.
- L. 1885 BUDIN, PIERRE, M.D., *Professeur agrégé à la Faculté de Médecine de
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Hyde, Paris.*
- 1887 BURFORD, GEORGE HENRY, M.B., C.M.Aber., 20, Queen Anne Street, w.
- F.F. BURTON, J. E., *Surgeon to the Liverpool Hospital for Women, 64,
Rodney Street, Liverpool. C. 1884-8. Hon. Loc. Sec.*
- 1887 BURY, EDWARD CHARLES, M.R.C.S., L.S.A., M.D., 5, York Row,
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Square, 82, Mortimer Street, Cavendish Square, w.*
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L.M.K. and Q.C.P.I., *Physician for Diseases of Women to the
Royal Hospital, Belfast, and Physician to the Belfast Hospital for
Sick Children, Lower Crescent, Belfast. C. 1893.*
- L. 1885 BYFORD, WILLIAM HEATH, M.D., Chicago, U.S.A.
- 1887 CALDWELL, W. SPENCER, M.D., Freeport, Ills., U.S.A.
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 L. 1887 CLARKE, THOMAS KILNER, F.R.C.S.Eng., M.D., M.A., M.B.Cantab., 66, John William Street, Huddersfield.
 1886 CLEGHORN, GEORGE, M.D.Dur., Blenheim, New Zealand. C. 1893.
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 F.F. COGHILL, JOHN GEORGE SINCLAIR, M.D., F.R.C.P.Edin., *Physician Royal National Hospital for Consumption, Ventnor*, St. Catherine House, Ventnor, Isle of Wight. C. 1884-7. V.P. 1888.
 L. F.F. COLE, RICHARD BEVERLEY, M.D., A.M., M.R.C.S.Eng., Ph.D., San Francisco, California, U.S.A.
 F.F. COLEMAN, CHARLES ALFRED, M.D.Edin., Hill View, Streatham Common, S.W.
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 L. 1887 COOK, S. L., M.D., Washington, U.S.A.
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- F.F. CRANNY, JOHN JOSEPH, M.D.Dub., A.B., F.R.C.S.I., *Surgeon to the Jervis Street Hospital, Examiner in Midwifery Royal College of Surgeons, Ireland*, 17, Merrion Square North, Dublin.
- F.F. CREASE, J. ROBERTSON, F.R.C.S.Edin., 2, Ogle Terrace, South Shields.
- 1886 CRESSWELL, PEARSON ROBERT, F.R.C.S.Ed., Dowlais, Merthyr Tydfil.
- 1888 CRICHTON, GEORGE, M.B., L.R.C.S.Edin., 3, Cambridge Villas, Twickenham.
- F.F. CRIPPS, C. COUPER, M.D., M.R.C.S., 187, Camberwell Grove, Denmark Hill, s.e.
- 1888 CRISP, ERNEST HENRY, L.R.C.P., M.R.C.S., The Lawns, Balham Hill, Clapham Common, s.w.
- 1891 CROMIE, JOHN, M.R.C.S., Blyth, Northumberland.
- F.F. CROOM, JOHN HALLIDAY, M.D., *Physician to the Royal Maternity Hospital, Edinburgh, President of the Obstetrical Society of Edinburgh*, 25, Charlotte Square, Edinburgh. C. 1884-6. V.P. 1887-9.
- L. 1887 CROUZAT, E., M.D., *Professeur de Clinique d'Accouchements à la Faculté de Médecine de Toulouse*, 9, Rue de Sénéchal, Paris.
- 1891 *CUMMINGS, H. J., M.D.
- 1886 CUSHING, CLINTON, M.D., 636, Sutter Street, San Francisco, U.S.A.
- 1888 CUTHBERT, WILLIAM WOOD, M.R.C.S.Eng., L.S.A.Lond., Mendlesham, Stonham, Suffolk.
- 1891 CURRY, MATTHEW ALLISON, M.D., Halifax, Nova Scotia.
- F.F. DAVIES, ELLIS THOMAS, M.D., *Assistant Medical Officer, Hospital for Women*, 97, Shaw Street, Liverpool.
- 1892 DAVIES, W. J. F., M.D., Johannesburg, South Africa.
- 1892 DAVIS, W. E. B., M.D., Rome, Georgia, U.S.A.
- 1885 DEMPSEY, ALEXANDER, M.D.Q.U.I., L.R.C.S.I., *Physician and Gynaecologist to Extern Department Mater Infirmorum Hospital*, Clifton Street, Belfast.
- F.F. DESSAIGNES, A. RIBEMONT, M.D., *Professeur agrégé à la Faculté de Médecine de Paris, Accoucheur de l'Hôpital Beaujon*, 10, Boulevard Malesherbes, Paris.
- L. 1887 DEWES, FREDERICK JOSEPH, L.R.C.P.Lond., M.R.C.S.E., care of Messrs. Binney and Co., Madras, India.
- 1888 DICKEY, SAMUEL, M.D., *Physician to Belfast Lying-in Hospital*, 9, Clifton Street, Belfast.
- F.F. DICKINSON, T. VINCENT, M.D., *Physician to the Out-Patients, Chelsea Hospital for Women*, 33, Sloane Street, s.w.
Hon. Sec. 1891. V.P. 1893.
- 1886 DICKSON, CHARLES COCHRANE, L.R.C.P. & S.Ed., Bowmont House, Willesden Lane, n.w.
- L.F.F. DINGLE, WILLIAM ALFRED, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., *Surgeon Royal Maternity Charity*, 46, Finsbury Square, E.C.
C. 1889. V.P. 1892.

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- 1887 DINGLEY, WILLIAM, M.R.C.S., L.S.A., 277, Camden Road, N.
 L. 1888 DIRNER, GUSTAV A., M.D., 4, Hatvani U., Buda-Pesth, Hungary.
 F.F. DIXON, JOHN, M.B., C.M.Edin., Portland House, 39, Gloucester Road, Finsbury Park, N.
 F.F. DIXON, WILLIAM EDWARD, M.R.C.S., L.S.A., Bridge Cottage, Oulton Broad, Lowestoft.
 1885 D'MONTE, DOMINIC A., M.D.Brussels, L.R.C.P.Lond., L.M.Ed., Bandora, Bombay. Hon. Loc. Sec.
 1891 DODD, T.A., M.R.C.S., 4, Eldon Square, Newcastle-on-Tyne.
 F.F. DOLAN, THOMAS M., M.D., F.R.C.S.Edin., Horton House, Halifax, Yorkshire. C. 1886-8 & 1892. V.P. 1888
 L. 1889 DOUGLAS, RICHARD, M.D., Nashville, Tennessee, U.S.A.
 F.F. DRAKE-BROCKMAN, EDWARD FORSTER, F.R.C.S.Eng., L.R.C.P. Lond., care of Messrs. H. K. Lewis, 136, Gower Street, London, W.C.
 F.F. DRAPER, JAMES WILLIAM, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A. Almondsbury, near Huddersfield.
 1891 DRUMMOND, DAVID, M.D., *Lecturer on Pathology, University, Durham*, 6, Savile Place, Newcastle-on-Tyne.
 1891 DRUMMOND, JAMES, M.D., 5, Albion Terrace, South Shields.
 L. 1885 DUDLEY, EMILIUS CLARKE, A.B., M.D., *Professor of Gynaecology, Chicago Medical College*, 1619, Indiana Avenue, Chicago, U.S.A.
 1889 DUKE, EDGAR, M.R.C.S.Eng., & L.S.A., 59, Pevensey Road, St. Leonards-on-Sea.
 F.F. DUNDAS, MORDAUNT GEORGE, M.R.C.S., L.S.A., Litcham, Norfolk.

 1891 EASTES, THOMAS, M.D., F.R.C.S., 18, Manor Road, Folkestone.
 1890 ECCLES, F. R., M.D., Ellwood Place, London, Ontario, Canada.
 L.F.F. EDIS, ARTHUR WELLESLEY, M.D., F.R.C.P., *Obstetric Physician to the Middlesex Hospital, Physician to the Chelsea Hospital for Women*, 22, Wimpole Street, W.
 Treas. 1884-7 & 1891-2. Pres. 1888. C. 1889.
 1892 ECHLIN, EDMUND B., B.A., M.D., C.M., Hamilton, Ontario, Canada.
 F.F. ELDER, GEORGE, M.D., 17, Regent Street, Nottingham. C. 1890.
 1892 ENGLEMANN, FREDK., M.D., Kreuznach, Germany.
 L. 1885 ENGLEMANN, GEORGE J., M.D., 3003, Locust Street, St. Louis, U.S.A.
 1892 ENGSTRÖM, OTTO, M.D., Helsingfors, Finland.
 F.F. ENSOR, EDWIN THOMAS, M.D., 23, Chesterton Road, North Kensington, W.
 1885 ERSKINE, WILLIAM, M.D.St. And., Tullyallan, Peak Hill, Sydenham.
 1885 EVANS, EBENEZER RICHARD, L.R.C.P., L.R.C.S.Edin., Llandysul, South Wales.

 1892 FAUSSETT, ANDREW, M.D., M.B., B.Ch., 66, Belgrave Road, S.W.
 1885 FEARNLEY, WILLIAM, L.R.C.S.Ed. (1875), 81, Elgin Avenue, Paddington, W.
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 L. 1886 FENGER, CHRISTIAN, M.D., Chicago, Illinois, U.S.A.

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- F.F. FENTON, W. HUGH, M.D., *Physician to the Out-Patients, Chelsea Hospital for Women*, 27, George Street, Hanover Square, w.
Hon. Sec. 1890. V.P. 1892.
- F.F. FENWICK, BEDFORD, M.D., M.R.C.P., *Physician to the Hospital for Women, and to the City of London Hospital for Diseases of the Chest*, 20, Upper Wimpole Street, w.
Libr. 1887. Hon. Sec. 1888-9. V.P. 1890. Editor 1892.
- 1891 FIELDEN, SAMUEL, M.D., Enfield Lodge, Shildon, Co. Durham.
- L.F.F. FITZGERALD, CHARLES EGERTON, M.D., West Terrace, Folkestone.
C. 1888-9.
- 1892 FLYNN, E. J. MOFFAT, L.R.C.P., L.R.C.S., 4, Gower Place, w.c.
- F.F. FORDHAM, JOHN W., L.R.C.P. Edin., 78, Mile End Road, E.
- 1891 FRANKISH, W. J., M.R.C.S., 102, Sloane Street, s.w.
- 1885 FRASER, GRÆME BISDEE, M.R.C.S., L.S.A., Belvidere, Weston-super-Mare.
- 1885 FULLER, LEEDHAM, M.R.C.S. Eng., L.S.A. Lond., Streatham Hill, s.w.
- 1889 GALLOWAY, A. RUDOLPH, M.D., 207, Union Street, Aberdeen.
- F.F. GARDINER, BRUCE HUBERT JOHN, L.R.C.P. Edin., M.R.C.S., Gloucester House, Barry Road, East Dulwich, s.e.
- F.F. GARDNER, WILLIAM, M.D., *Professor of Gynaecology in McGill's University*, 109, Union Avenue, Montreal, Canada. V.P. 1887.
- 1891 GARDNER, WILLIAM, M.D., Collins Street, Melbourne, Australia.
- 1891 GIBB, C. J., M.D., Westgate Road House, Newcastle-on-Tyne.
- L. 1885 GILES, PETER, M.R.C.S., L.R.C.P., The Quinta, Brobury, Hereford.
- F.F. GIMSON, THOMAS STEVENS, M.R.C.S., 32, Fitzroy Square, w.
- 1892 GLEDIDIN, ALFRED MAITLAND, M.D. Brux., F.R.C.S. Edin., care of L. Bruck, 13, Castlereagh Street, Sydney.
- 1886 GLOSTER, JAMES, M.B., C.M., 15, Upper Phillimore Place, w.
- 1891 GODSON, CLEMENT, M.D., M.R.C.P., *Consulting Physician to the City of London Lying-in Hospital, late Obstetric Physician St. Bartholomew's Hospital*, 9, Grosvenor Street, w.
C. 1892.
- 1891 GOGGANS, J. A., M.D. N.Y., Alexander City, Alabama, U.S.A.
- F.F. GOLDSMITH, GEORGE POCKOCK, M.D., 3, Harpur Place, Bedford.
C. 1891.
- L. 1886 *GORDON, S. C., M.D.
- 1891 GOWANS, WILLIAM, M.D., Westoe House, Westoe, South Shields.
- 1890 GRAY, CLEMENT FREDERICK, M.R.C.S., L.S.A., Newmarket, Cambs.
- 1891 GREEN, W. O., M.D., 709, 2nd Street near Chestnut, Louisville, Kentucky, U.S.A.
- F.F. GRIFFITH, G. DE GORREQUER, L.R.C.P., M.R.C.S., *late Senior Physician to Hospital for Women and Children, Pinlico*, 34, St. George's Square, s.w., and New Indian Club, Whitehall Gardens, s.w.
- F.F. GRIGG, W. CHAPMAN, M.D., M.R.C.P., *Assistant Obstetric Physician to the Westminster Hospital, Physician to Queen Charlotte's Hospital*, 27, Curzon Street, Mayfair, w.
C. 1884-6 & 1892. Hon. Sec. 1886-7. V.P. 1888. Pres. 1891.
- L. 1885 GRIMSDALE, THOMAS BABINGTON, M.B., M.R.C.S., *Assistant Surgeon Hospital for Women, Liverpool*, 29, Rodney Street, Liverpool.

- Elected.
- 1885 HACKNEY, JOHN, M.D., M.R.C.S., L.S.A., Oaklands, Hythe, Kent.
- F.F. 1888 HALL, ALFRED R., M.D., L.R.C.P., M.R.C.S., Sunnybank, Shoot-up Hill, Brondesbury, N.W.
- L. 1885 HALL, RUFUS B., M.D., 281, West Seventh Street, Cincinnati, U.S.A.
- 1888 HAMILTON, J. BEAMISH, L.R.C.P., Tudor House, Tenby.
- L. 1886 HANKS, H. T., M.D., 55, East 59th Street, New York, U.S.A.
- F.F. HARPER, JAMES, M.D.Lond., 25, Rosary Gardens, South Kensington, S.W.
- F.F. HARRIES, THOMAS DAVIES, L.R.C.P.Lond., F.R.C.S.Eng., L.S.A., Grosvenor House, Aberystwith.
- F.F. HASLAM, WM. DOIGE, M.D.Brux., M.R.C.S.Eng., L.S.A., Maywood, Christchurch Road, Bournemouth.
- F.F. HAULTAIN, FRANCIS NICOL, M.D., F.R.C.P.Ed., *Physician for Diseases of Women, Royal Dispensary, Edinburgh*, 17, Rutland Street, Edinburgh.
- 1889 HAWKES, A. E., M.D., L.R.C.P.Edin., L.R.C.S.Edin., and L.M., 22, Abercromby Square, Liverpool.
- 1891 HAWKINS-AMBLER, G. A., F.R.C.S., 162, Upper Parliament Street, Liverpool.
- L. 1886 HEADLEY, W. BALLS, M.A., M.D., M.R.C.P., 17, Collins Street East, Melbourne.
- 1887 HEALD, BENJAMIN GRAY, L.R.C.P.Ed., L.F.P.S.G., Red House, East Street, Leeds.
- F.F. HEBERT, PAUL ZOTIQUE, M.D., C.M., L.R.C.P.Lond., 54, Berners Street, Oxford Street, W.
- L. 1885 HEIBERG, WILHELM, M.D., Frederikshospital, Copenhagen.
- 1885 HENSMAN, FRANK HENRY, M.R.C.S.Eng., *Surgeon Major, Army Medical Staff*, Windsor Barracks.
- L. 1887 HETHERINGTON, GEO. ALBERT, M.D., St. John, N.B., Canada.
- F.F. HICKS, GEORGE BORLASE, M.R.C.S., L.M.Eng., L.R.C.S.Edin., 149, Amherst Road, Hackney, E.
- 1885 HILL, T. WOOD, L.R.C.P., M.R.C.S., 38, Clapham Road, Bedford.
- F.F. HILLS, AUGUSTUS PHILLIPS, M.R.C.S.Eng., Carlton House, Prince of Wales Road, Battersea Park, S.W. C. 1888-9.
- F.F. HINE, ALFRED LEONARD, L.R.C.P.Lond., M.R.C.S., L.S.A., Eppingdale, Leytonstone road, E. C. 1891.
- 1887 HITCHINS, THOMAS J., M.D., M.R.C.S., L.R.C.P., &c., Broadfield, Crawley, Sussex.
- F.F. HODGSON, ROBERT HUGH, L.R.C.P.Edin., M.R.C.S.Eng., 204, Rye Lane, Peckham, S.E.
- E.F. HOLLAND, EDMUND, M.D., M.R.C.P., *Physician to the Hospital for Women*, 1, Titchfield Terrace, North Gate, Regent's Park, N.W. C. 1893.
- 1890 HOLMES, Dr. H. R., Portland, Oregon, U.S.A.
- L. 1885 HOOPER, JOHN WILLIAM DUNBAR, L.R.C.P.Edin., L.R.C.S.Edin., *Surgeon to the Women's Hospital, Melbourne*, 54, Collins Street East, Melbourne.
- L. 1886 HOPKINS, JAMES B., Parkerville, Kansas, U.S.A.
- F.F. HOWELL, HORACE SYDNEY, M.D., F.R.C.S., 18, Boundary Road, St. John's Wood, N.W.
- 1887 HUMISTON, WILLIAM H., M.D., Cleveland, Ohio, U.S.A.

Elected.

- 1887 HUTCHISON, GEORGE WRIGHT, M.D.Aber., M.R.C.P.Edin., Chipping Norton, Oxon.
- F.F. ISDELL, FITZGERALD, A.B., M.B.Dub., 2, Great St. Andrew Street, W.C.
- 1886 JACKSON, JAMES, M.R.C.S., L.S.A., 15, Huntington Street, Barnsbury, N.
- F.F. JACKSON, THOMAS VINCENT, F.R.C.S.Edin., *Senior Surgeon to the Wolverhampton and Staffordshire General Hospital*, Whetstone House, Wolverhampton. C. 1884-7.
- 1886 JAGGARD, WILLIAM WRIGHT, M.D., 2330, Indiana Avenue, Chicago, Ill., U.S.A.
- F.F. JAMES, W. CULVER, M.D., 11, Marloes Road, Kensington, s.w. C. 1884-7.
- 1887 JAMIESON, ARCHIBALD, M.D., C.M., Queen's University, Kingston, Ontario, L.S.A.Lond., Kars, Ontario, Canada.
- 1885 JAMIESON, ROBERT ALEXANDER, M.D.Q.U.I., Shanghai, China.
- F.F. JAY, HENRY MASON, M.D.Aberd., Chippenham, Wilts.
- 1891 JAYNES, V. A., M.R.C.S.Eng., L.S.A., 157, Jamaica Road, Bermondsey.
- 1887 JESSETT, FREDERICK BOWREMAN, F.R.C.S.Eng., *Surgeon to the Cancer Hospital, Brompton*, 1, Buckingham Palace Mansions, Grosvenor Gardens, s.w. C. 1891. Pres. 1893.
- L. 1885 JEWETT, CHARLES, M.D., 307, Gates Avenue, Brooklyn, U.S.A.
- F.F. JOHNSON, JAMES BOVELL, M.D., M.Ch.Montreal, L.S.A. Lond., Mickleton, Campden, Gloucestershire.
- 1886 JOHNSON, JOSEPH TABER, M.D., *Professor of Obstetrics*, 926, Farragut Street, N.W., Washington, U.S.A.
- 1886 JOHNSTON, JOHN, M.R.C.S.Eng., 2, Rocky Hill Terrace, Maidstone.
- 1885 JOHNSTON, WILLIAM BEECH, M.D., 157, Jamaica Road, s.e.
- L. 1886 JOHNSTONE, ARTHUR W., M.D., 285, Auburn Avenue, Cincinnati, Ohio.
- 1891 JOHNSTONE, GEORGE W., L.R.C.P., 14, St. Mary's Place, Newcastle-on-Tyne.
- 1887 JONES, C. N. DIXON, M.D., 776, Madison Avenue, New York.
- F.F. JONES, H. MACNAUGHTON, M.D., *Examiner in Midwifery*, Royal University, Ireland, 141, Harley Street, w. C. 1890.
- 1887 JONES, JAMES THORESBY, M.R.C.S., L.R.C.P.E., L.M., 103, Sutherland Avenue, w.
- F.F. JONES, LEWIS, M.D., M.R.C.S., Oakmead, Balham, s.w.
- 1885 JOUBERT, CHARLES HENRY, M.B., Lond., F.R.C.S.Eng., *Acting Professor of Midwifery*, Calcutta, 6, Harrington Street, Calcutta.
- 1886 KELLETT, ROBERT GUY, L.K.Q.C.P.I., The Pritchards, Halstead, Essex.
- L. 1889 KELLOGG, J. H., M.D., Battle Creek, Michigan, U.S.A.
- 1891 KEMPSTER, WM. H., M.B.Durh., 2, Queen Anne Terrace, Albert Road, Battersea Park, s.w.

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- F.F. KENNEDY, HUGH B., L.R.C.S.I., *Assistant Surgeon to the Mater Misericordia Hospital*, 89, Denmark Street, Dublin.
- F.F. KENNEDY, JOHN BLYDESTYN, M.R.C.S.Eng., L.S.A., Stratford Hall, Stratford, E.
- 1885 KENNEDY, SAMUEL, F.R.C.S., L.R.C.P.Edin., 22, George Street, Hanover Square, W.
- F.F. KIALLMARK, HENRY WALTER, M.R.C.S., 5, Pembridge Gardens, Bayswater, W.
- 1891 KIERSTED, Dr., Upper Sheffield, Sunbury County, New Brunswick, Canada.
- L. 1886 KING, ALBERT F. A., M.D., 1315, Mass. Avenue, N.W., Washington, D.C., U.S.A.
- 1891 KIRKHAM, F. W., L.R.C.P., Downham Market, Norfolk.
- F.F. KNOTT, CHARLES, M.R.C.P.Edin., Liz Ville, Elm Grove, Southsea.
-
- F.F. LAMPREY, RICHARD ORFORD, L.R.C.P. and L.R.C.S.Edin., 62, East Hill, Wandsworth, S.W.
- 1890 LANGLEY, AARON, L.R.C.P.Edin. and L.M., L.R.C.S.Edin., 149, Walworth Road, S.E.
- 1890 LANKFORD, Dr. LIVIUS, Norfolk, Virginia, U.S.A.
- 1893 LATHBURY, A. E. A., L.R.C.P., M.R.C.S., Armoury Lodge, City Road.
- L. 1886 LAWRIE, JAS. MACPHERSON, M.D., *Physician to the Weymouth Sanatorium*, Greenhill, Weymouth.
- L.F.F. LEBLOND, ALBERT, M.D., *Médecin de Saint-Lazare*, 54, Rue d'Hauteville, Paris.
- 1889 LEIGH, W. W., L.R.C.P.Edin., M.R.C.S.Eng., L.S.A., Glyn Bargoed, Treharris, R.S.O., South Wales.
- L.F.F. LE PAGE, JOHN FISHER, M.D., L.R.C.P.Edin., 17, The Crescent, Salford, Manchester.
- F.F. LESLIE, WILLIAM MURRAY, M.B., C.M.Edin., 41, Glengall Road, Millwall, E.
- F.F. LEWIS, HENRY, M.D., West Terrace, Folkestone.
- F.F. LIGERTWOOD, THOMAS, M.D., Royal Hospital, Chelsea, S.W. C. 1892.
- 1889 LIGHT, E. MELLOR, M.A., M.B. and B.C.Camb., 2, Wilton Place, Belgrave Square, S.W.
- 1891 LIMONT, JAMES, M.B., M.R.C.P., 5, Queen Square, Newcastle-on-Tyne.
- F.F. LLEWELLYN, REES RALPH, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., 152, Whitechapel Road, E.
- 1891 LLOYD, H. J., L.R.C.P., Tyncoed, Barmouth, North Wales.
- F.F. LLOYD, SAMUEL, M.D., 4, High Street, Bloomsbury, W.C.
- 1885 LONG, FREDERICK WILLIAM DEVEREUX, L.S.A., 31, Finsbury Square, E.C.
- F.F. LOW, RICHARD MARSDEN PILKINGTON, M.B., L.M.Edin., L.R.C.P. Edin., L.R.C.S.Edin., L.M., 70, Philbeach Gardens, S.W.
- 1891 LUCAS, CHARLES G., M.D., 718, Second Street, Louisville, Kentucky, U.S.A.

Elected.

- L. 1885 LUSK, WILLIAM T., M.D., 47, East Thirty-fourth Street, New York, U.S.A. V.P. 1887.
- F.F. LYCETT, JOHN ALLAN, M.D., M.R.C.P. Edin., Gatcombe, Wolverhampton. Hon. Loc. Sec. C. 1889.
- F.F. MACAN, ARTHUR VERNON, B.A., M.B. Dub., M.Ch., M.A.O., *Ex-Master of the Rotunda Hospital, Dublin*, 53, Merrion Square, Dublin. V.P. 1887. Pres. 1889. C. 1890.
- L. 1885 MACAN, JAMESON JOHN, M.A., M.R.C.S., 62, George Street, Portman Square, w.
- F.F. MACCALLUM, DUNCAN C., M.D., 45, Union Avenue, Montreal, Canada.
- F.F. MACGAVIN, JOHN, L.R.C.P., L.R.C.S.E., 72, Trafalgar Road, Greenwich, s.e.
- L. 1889 MACKAY, W. A., M.D., Huelva, Spain.
- 1886 MACKENZIE, WILLIAM G., F.R.C.S. Ed., 92, Richmond Terrace, Belfast.
- L. 1888 MACKINTOSH, G. D., M.D. Aberd., The Craig, St. Anne's-on-the-Sea, Lancashire.
- L. 1888 MACPHATTER, N. LINCOLN, M.D., 1362, California Street, Denver, Colo., U.S.A.
- 1886 MACPHERSON, CHARLES, M.B. Glas., Bonar Bridge, Sutherlandshire, N.B.
- 1887 MANSEY, FREDERICK, M.R.C.S. Eng., The Priory, Church Road, Tunbridge Wells.
- 1888 MANTON, WALTER PORTER, M.D., 43, Watson Street, Detroit, Mich., U.S.A.
- 1887 MARLEY, HENRY FREDERICK, M.R.C.S.E., L.R.C.P., L.S.A., L.M., The Nook, Padstow, Cornwall.
- 1891 MARTIN, CHRISTOPHER, M.B. Edin., C.M., 3, Crescent, Birmingham.
- 1891 MASTERS, JOHN ALFRED, M.D., M.R.C.P., 35, Bruton Street, w.
- F.F. MASSON, GEORGE BLAKE, L.R.C.S., L.R.C.P., L.M., Dashwood House, Ramsgate.
- 1889 MAUNSELL, HENRY WIDENHAM, M.A., M.D. Trin. Coll. Dub., 37, Stanhope Gardens, South Kensington. C. 1893.
- 1886 MAURY, R. B., M.D., Memphis, Tennessee, U.S.A.
- 1892 MCMURTRY, L. S., M.D., Louisville, Kentucky, U.S.A.
- 1891 MEARNES, WILLIAM, M.D., 22, Bewick Road, Gateshead-on-Tyne.
- 1891 MEEK, H., M.D., 331, Queen's Avenue, London, Ontario, Canada.
- 1887 MENDES DE LEON, M.A., M.D., Kloveniersburgwal, 94, Amsterdam. C. 1892.
- L. 1886 MERRIMAN, HENRY P., M.D., 2239, Michigan Avenue, Chicago, U.S.A.
- 1889 MERRITT, Dr., St. Catherine's, Ontario, Canada.
- 1891 MICHIE, H., M.B. Aber., C.M., Samaritan Hospital, Nottingham.
- F.F. MILLER, ANDREW, M.D., 5, Grosvenor Street, w.
- L. 1886 MILLER, DE LASKIE, M.D., *Professor of Obstetrics, Rush Medical College*, 2011, Prairie Avenue, Chicago, U.S.A.
- 1892 MOLSON, CAVENDISH, L.R.C.P., 13, Lingfield Road, Wimbledon.

Elected.

- F.F. MOORE, STEPHEN HENRY, F.R.C.S.E., *Medical Superintendent of Chelsea Infirmary*, Cale Street, s.w. C. 1891.
- 1887 MORISON, ALBERT EDWARD, M.B., C.M.Ed., M.R.C.S., Hartlepool.
- 1891 MORISON, J. R., M.D., F.R.C.S., 14, Savile Row, Newcastle-on-Tyne.
- F.F. MORTON, THOMAS, M.D.Lond., M.R.C.S., L.S.A., *President of the Harveian Society of London*, 15, Greville Road, Kilburn, n.w. C. 1889-o.
- F.F. MOULLIN, J. A. MANSELL, M.D., M.R.C.P., *Physician to the Hospital for Women, Soho; Assistant Physician for Diseases of Women to the West London Hospital*, 69, Wimpole Street, w. C. 1884. Hon. Sec. 1887-8. V.P. 1889. Libr. 1892. Treas. 1893.
- L. 1885 MUNDÉ, PAUL F., M.D., 20, West Forty-fifth Street, New York, U.S.A. *Professor of Gynecology at the New York Polyclinic, and at Dartmouth College.* V.P. 1889.
- F.F. MUNRO, ROBERT H., M.B., C.M.Edin., Friockheim, Forfarshire.
- 1893 MURPHY, G. WYNDHAM, B.A., M.B., M.Ch., &c., 98, Gloucester Crescent, Hyde Park, w.
- F.F. MURPHY, JAMES, M.D., *Surgeon to the Sunderland Hospital for Women and Children*, Holly House, Sunderland. Hon. Loc. Sec. V.P. 1892.
- 1887 MURRAY, CHARLES STORMONT, L.R.C.S.Ed., L.S.A., L.M.Ed., 85, Gloucester Place, Portman Square, w.
- 1885 MURRAY, ROBERT MILNE, M.B.Edin., M.R.C.P.Edin., *Secretary Edinburgh Obstetrical Society; Lecturer on Gynecology, Edinburgh School; Physician for Diseases of Women to the Western Dispensary*, 10, Hope Street, Edinburgh. C. 1886.
- 1891 MURRAY, W., M.D., F.R.C.P., 34, Clayton Street West, Newcastle-on-Tyne.
- F.F. MUTCH, F. ROBERTSON, M.D., C.M.Aberd., "Strathgairn," Goldsmith Street, Nottingham.
-
- 1891 NAPIER, A. D. LEITH, M.D., M.R.C.P., F.R.S.E., *Physician to Out-Patients Chelsea Hospital for Women*, 67, Grosvenor Street, w. Hon. Sec. 1893.
- 1889 NAUMANN, J. C. F., L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., 125, Gower Street, w.c.
- 1891 NEDWILL, COURTNEY, M.D., Christchurch, New Zealand.
- L. 1886 NELSON, DANIEL THURBER, M.D., 2400, Indiana Avenue, Chicago, U.S.A.
- L.F.F. NETHERCLIFT, WILLIAM HENRY, F.R.C.S.Eng., Junior Athenæum Club, Piccadilly, w.
- L.F.F. NEUGEBAUER, FRANZ, M.D., *Assistant de la Clinique Gyniatrique à l'Université de Varsovie*, Leszno, 33, Warsaw, Russia (Poland). V.P. 1887.
- 1891 NEWTON, R. C., M.R.C.S., 18, Eldon Square, Newcastle-on-Tyne.
- F.F. NUNN, T. W., F.R.C.S., *Consulting Surgeon Middlesex Hospital*, 8, Stratford Place, w. C. 1884. V.P. 1886.
- F.F. NUTT, WILLIAM ANTHONY, L.S.A.Lond., Craven House, Northumberland Avenue.

Elected.

- 1885 O'DONNELL, THOMAS J., L.K.Q.C.P.I., L.M., L.R.C.S.I., Oorgaum, Mysore State, India.
- L. 1889 O'CALLAGHAN, ROBERT, L.R.C.P., F.R.C.S.I., *Surgeon to the County Infirmary, Carlow*, The Bungalow, Carlow. C. 1891.
- 1891 OLIVER, THOS., M.D., F.R.C.P., *Professor of Physiology, University, Durham*, 12, Eldon Square, Newcastle-on-Tyne. C. 1892.
- 1885 ORAM, RICHARD R. W., L.R.C.P.Lond., M.R.C.S.E., Cremyll, Wandsworth Common. C. 1890.
- L. 1889 OSTROM, H. J., M.D., 42, West 48th Street, New York, U.S.A.
-
- F.F. PADMAN, JOHN, M.R.C.S.Eng., 22, Bloomsbury Square, w.c.
- 1891 PAGE, FREDERICK, M.D., *Surgeon to the Royal Infirmary*, 1, Saville Place, Newcastle-on-Tyne.
- L. 1888 PARKINSON, J. TAYLOR, M.D., Brook View, Crystal Brook, South Australia.
- 1886 PARSONS, JOHN INGLIS, M.D.Dur., M.R.C.P., *Physician to the Out-patients, Chelsea Hospital for Women*, 3, Queen Street, Mayfair, w. C. 1890. Hon. Sec. 1892.
- 1890 PECK, F. S., Mozafferpore, Bengal.
- 1891 PETTER, WALTER, M.B., Stanhope Road, Darlington.
- 1891 PHILLIPSON, Professor J. H., M.D., D.C.L., F.R.C.P., *Professor of Medicine, University, Durham*, 7, Eldon Square, Newcastle-on-Tyne.
- F.F. PICKETT, JACOB, M.D.St. And., L.R.C.P. Edin., L.M., M.R.C.S.Eng., L.M., L.S.A., 26, Colville Square, w.
- L.F.F. PINARD, ADOLPHE, M.D., *Professeur agrégé de la Faculté, Accoucheur de Lariboisière*, 11, Rue Rocqueline, Paris.
- F.F. PLATT, WILLIAM HENRY, L.R.C.P. Edin., L.R.C.S.I., St. James's Lodge, West End Lane, Hampstead, n.w. C. 1890.
- L. 1885 POLK, WILLIAM M., M.D., *President New York Obstetrical Society*, 13, East Thirty-fourth Street, New York, U.S.A.
- 1886 POPE, HARRY CAMPBELL, M.D., F.R.C.S.Lond., 280, Goldhawk Road, Shepherd's Bush. C. 1890.
- 1886 PORTER, P., M.D., 33, East Adams Avenue, Detroit, Michigan, U.S.A.
- 1891 POULTER, REGINALD, M.R.C.S., L.R.C.P., 31, Ridgmount Gardens, w.c.
- 1888 POWELL, HENRY WILLIAM, L.R.C.P., National Conservative Club, Pall Mall, P. and O. SS. "*Victoria*."
- 1887 PRICE, JOSEPH, M.D., 500 N. 20th Street, The Preston Retreat, Philadelphia, U.S.A.
- 1886 PRINGLE, JAMES HOGARTH, M.B., C.M., 256, Bath Street, Glasgow, N.B.
- F.F. PURCELL, FERDINAND ALBERT, M.D., M.Ch., R.V.I., M.R.C.S., L.M.Eng., *Surgeon to the Cancer Hospital, Brompton*, 7, Manchester Square, w. C. 1888-89-93.
- L.F.F. PUREFOY, RICHARD DANCER, M.B., *Obstetric Surgeon, Adelaide Hospital*, 13, Merrion Square, Dublin. C. 1884-7.

- Elected.
- 1887 RAE, GEORGE A., L.R.C.P., L.R.C.S.Ed., 1, Outram Terrace, Stoke Devonport.
- 1887 RANNY, GEORGE E., M.D., Lansing, Michigan, U.S.A.
- F.F. RASCH, ADOLPHUS A. F., M.D., M.R.C.P., *Physician for Diseases of Women and Children to the German Hospital; Physician to Training Hospital, Tottenham, 7, South Street, Finsbury, E.C.* C. 1891.
- F.F. RAWLINGS, JOHN ADAMS, M.R.C.P.Edin., *Physician to the Swansea Hospital, Preswylfa, Swansea.* C. 1888-9.
- 1887 READMAN, T., L.R.C.P.Ed., L.M., &c., Aldbrough, Hull.
- L. 1887 REED, CHARLES A. L., M.D., Cincinnati, Ohio.
- F.F. REEVES, HENRY ALBERT, F.R.C.S.Edin., *Surgeon to the Hospital for Women, 7, Grosvenor Street, W.* C. 1884-7. V.P. 1892.
- F.F. REID, W. LOUDON, M.D.Glas., *Lecturer on Midwifery and Diseases of Women and Children, Western Medical School, Glasgow; Physician to the Glasgow Maternity Hospital, 7, Royal Crescent, Glasgow.* C. 1888-9.
- F.F. RICHARDSON, JOHN HUMPHREY HOWARD, M.R.C.S., L.S.A., 22, North Street, Wandsworth, S.W.
- 1887 RICHMOND, THOMAS, L.R.C.P.E., L.F.P.S.G., 2, West Garden Street, Glasgow.
- L. 1888 RICKETTS, E. S., M.D., 93, East Fourth Street, Cincinnati, Ohio, U.S.A.
- F.F. RILEY, JAMES, L.R.C.P.Edin., M.R.C.S.Eng., L.M., L.S.A., 131, St. George's Road, South Belgravia, S.W.
- L.F.F. ROBERTS, D. LLOYD, M.D., F.R.C.P., F.R.S.Edin., *Obstetric Physician to the Manchester Royal Infirmary, Physician to St. Mary's Hospital, Manchester, and Lecturer on Clinical Midwifery and the Diseases of Women, in Owens College, 11, St. John's Street, Manchester.* C. 1884. V.P. 1886.
- F.F. ROBERTS, THOMAS, L.S.A.Lond., Falloden House, 81, Tredegar Road, Bow, E.
- L.F.F. ROBERTSON, A. MILNE, M.D.Edin., Gonville House, Roehampton, S.W.
- 1888 ROBSON, ARTHUR W. MAYO, F.R.C.S.Eng., L.R.C.P.Lond., Hillary Place, Woodhouse Lane, Leeds. C. 1893.
- F.F. ROOTS, WILLIAM HENRY, M.R.C.S.Eng., Canbury House, Kingston-on-Thames.
- L. 1885 ROSEBRUGH, JOHN WELLINGTON, M.D., Hamilton, Ont., Canada.
- L. 1888 ROSS, JAMES F. W., Wellesley and Sherborne Street, Toronto, Canada.
- F.F. ROUTH, CHARLES HENRY FELIX, M.D., M.R.C.P., *Consulting Physician to the Samaritan Free Hospital, 52, Montague Square, W.* V.P. 1884-7. C. 1888 & 1892. Pres. 1890.
- L.F.F. RUSSELL, LOGAN D. H., M.D., M.R.C.S., Government Park, St. Catherine, Jamaica.
- F.F. RYLEY, J. BERESFORD, M.D., M.R.C.S., L.R.C.P., 1, Bentinck Street, Manchester Square, W.
- F.F. *SALTER, THOMAS KNIGHT, M.R.C.S.Eng., L.F.P.S.C.G. (retired).
- F.F. SAVAGE, THOMAS, M.D., *Surgeon Birmingham and Midland Hospital, 32, Newhall Street, Birmingham.* C. 1884-6. V.P. 1887.

Elected.

- L. 1886 SAWYER, EDWARD WARREN, M.D., '3,733, Vincennes Avenue, Chicago, U.S.A.
- 1892 SCHACHT, F. F., M.D., *Physician to Out-Patients, Chelsea Hospital for Women*, 168, Earl's Court Road, s.w. Hon. Sec. 1893.
- 1889 SCOTT, ALEXANDER THOMAS, M.R.C.S.Eng. and L.S.A., 8, Parkhurst Road, Camden Road, N.
- 1891 SHAPLEY, FRANK, Dunedin, Sidcup.
- 1887 SHAW, JOHN, M.D.Lond., M.R.C.P.Lond., Burlington House, Wiloughly Road, Hampstead, N.W. C. 1888.
- 1891 SHAW-MACKENZIE, J. A., M.B.Lond., *Pathologist Chelsea Hospital for Women*, 24, Savile Row, w. C. 1893.
- 1889 SIMPSON, ALEXANDER RUSSELL, M.D., *Professor of Midwifery and Diseases of Women, Edinburgh University*, 52, Queen Street, Edinburgh. V.P. 1890. Pres. 1892. C. 1893.
- 1887 SIMPSON, DAVID, M.B., C.M.Aberd., care of Messrs. Arbuthnot & Co., Madras.
- 1885 SIMPSON, JAMES HERBERT, M.D.Aberd., Hillmorton Road, Rugby. C. 1887.
- 1885 SINCLAIR, WILLIAM JAPP, M.D.Aberd., *Professor of Obstetrics and Gynaecology, Owens College; Physician to the Manchester Southern Hospital*, 268, Oxford Road, Manchester. C. 1887-90, 1892-3. V.P. 1891.
- L. 1885 SKENE, ALEXANDER J. C., M.D., 167, Clinton Street, Brooklyn, N.Y., U.S.A.
- F.F. SLIMON, WILLIAM, M.B.Glas., 4, York Place, Bow Road, E.
- 1886 SLOAN, SAMUEL, M.D., *Physician to the Glasgow Maternity Hospital*, 5, Somerset Place, Sauchiehall Street West, Glasgow. C. 1889.
- L. 1887 SMART, DAVID, M.B., B.Sc.Edin., *Assistant Surgeon Hospital for Women, Liverpool*, 24, Hartington Road, Liverpool.
- 1889 SMITH, ALFRED J., M.B., 32, Lower Baggot Street, Dublin.
- L.F.F. SMITH, E. T. AYDON, L.S.A., Disco House, 10, Alexandra Road, St. John's Wood, N.W.
- 1887 SMITH, G. COCKBURN, M.D.Bru., 5, Inverness Gardens, Kensington, W.
- L.F.F. SMITH, HEYWOOD, M.A., M.D., M.R.C.P., 18, Harley Street, w. Hon. Sec. 1884-5. C. 1889-90. V.P. 1892.
- 1886 SMITH, JAMES GREIG, M.A., M.B. & C.M., *Surgeon to the Bristol Infirmary*, 16, Victoria Square, Clifton, Bristol. C. 1887-9. V.P. 1890.
- 1891 SMITH, J. W., M.D., Balgonie House, Ryton-on-Tyne, Durham.
- F.F. SMITH, RICHARD T., M.D., *Physician to the Hospital for Women, Soho*, 17, George Street, Hanover Square, w. C. 1884-7. Hon. Sec. 1889-90. V.P. 1891-3.
- F.F. SMYLY, W. JOSIAH, M.D., F.K.Q.C.P., *Master of the Rotunda Hospital; Examiner in Midwifery R.C.S. Dublin; Gynaecologist to the City of Dublin Hospital*, 56, Fitzwilliam Square, Dublin. C. 1888-90. V.P. 1892.
- F.F. SMYTH, BRICE, M.B., 13, College Square East, Belfast. C. 1887. V.P. 1889.
- F.F. SPANTON, W. DUNNETT, F.R.C.S.Edin., *Surgeon to the North Staffordshire Infirmary*, Chatterley House, Hanley, Staffordshire. C. 1887-9. V.P. 1890.

Elected.

- F.F. STEER, WILLIAM, M.R.C.S., L.S.A., *Medical Superintendent, Fulham Union Infirmary*, Fulham Palace Road, Hammersmith, w.
- 1889 STEKOULIS, CONSTANTIN, M.D., Constantinople.
- 1885 STEVENSON, EDMUND SINCLAIR, L.R.C.P.Edin., M.R.C.S.Eng., Rondebosch, Cape of Good Hope.
- 1892 STEWART-McKAY, W. J., M.B., M.Ch., B.Sc., 36, College Street, Hyde Park, New South Wales.
- L. 1888 STONE, ISAAC S., M.D., 1309, H. Street, N.W. Washington, D.C., U.S.A.
- L. 1885 STRANGE, FREDERICK WILLIAM, M.R.C.S.Eng., M.C.P. & S. Ontario, 218, Simcoe Street, Toronto.
- 1886 STRANGE, W. HEATH, M.D., 5, Grosvenor Street, w.
- 1891 STRAUSS, LEON, M.D., Louisville, Kentucky, U.S.A.
- 1886 STUBBS, PERCY BELFORD TRAVERS, L.R.C.P., L.R.C.S., 331, King Street, Hammersmith, w.
- 1885 SUNDERLAND, SEPTIMUS, M.D., M.R.C.S., L.R.C.P.Lond., *Physician to the Royal Hospital for Women and Children*, 36, Bruton Street, w.
- L. 1885 SUTTON, RHOADS STANBURY, M.D., 419, Penn Avenue, Pittsburgh, U.S.A.
- F.F. SWAIN, W. PAUL, F.R.C.S., *late Surgeon Royal Albert Hospital, Devonport*, 17, The Crescent, Plymouth. C. 1884-7.
- F.F. SWAYNE, JOSEPH GRIFFITHS, M.D.Lond., *Consulting Physician, Accoucheur Bristol General Hospital*, 74, Pembroke Road, Clifton, Bristol. V.P. 1886-8.
- F.F. SWEENEY, MICHAEL PATRICK, L.R.C.S.I., 80, Acre Lane, Brixton, s.w.
- L. 1888 SWEETNAM, LESLIE MATTHEW, M.D., Toronto, Canada.
-
- L.F.F. TAIT, LAWSON, F.R.C.S., *Surgeon to the Birmingham and Midland Hospital for Women*, 7, The Crescent, Birmingham. V.P. 1884-6. Pres. 1886. C. 1887-9.
- L.F.F. TAYLER, WILLIAM HENRY, M.D.St.And., M.R.C.S.Eng., L.M., L.S.A., 13, Grosvenor Gardens, St. Leonards.
- L.F.F. TAYLOR, JOHN WILLIAM, F.R.C.S., *Surgeon to the Birmingham and Midland Hospital for Women*, 59, Bath Street, Birmingham. C. 1891.
- F.F. TEMPLE, THOMAS CAMERON, M.R.C.S., L.S.A., Sheffield, Beds.
- 1887 THOMAS, ARTHUR WILLIAM, M.R.C.S., L.S.A.Lond., Berwyn, Bolingbroke Grove, Wandsworth Common, s.w.
- L.F. THOMAS, HUGH, M.R.C.S., L.S.A., The Grange, Coventry Road, Birmingham.
- 1886 THOMPSON, J. H., M.D., 60, Via Due Macelli, Rome.
- 1885 THOMSON, DAVID, M.D., Park Square, Luton.
- L. 1889 TOWNSEND, FRANKLIN, Jun., M.D., 2, Park Place, Albany, N.Y., U.S.A.
- 1892 TRAVERS, W., M.D., 2, Phillimore Gardens, s.w.
- L. 1889 TUOHY, JOHN FRANCIS, M.D., M.Ch., *Surgeon I.M.S.*, Civil Surgeon, Allahabad, N.W. Provinces, India.

Elected.

L. 1887 UNDERWOOD, EDWARD F., M.D., Port Bombay, India

L. 1885 VAN DER VEER, ALBERT, M.D., 28, Eagle Street, Albany, New York, U.S.A.

1891 WADD, F. J., M.B.Aberd., C.M., M.R.C.S., L.S.A., Prospect House, Richmond.

1885 WALKER, CHARLES ROTHERHAM, M.D.Brussels, L.R.C.P.Lond., M.R.C.S., Gainsborough House, Leytonstone, E.

L. 1888 WALKER, DR. HOLFORD, 56, Isabella Street, Toronto, Ontario, Canada.

1889 WALLACE, ABRAHAM, M.D.Edin. M.B. and C.M., 64, Harley Street, W.

L.F.F. WALLACE, JOHN, M.D., *Obstetric Physician, Liverpool Royal Infirmary; Professor of Midwifery and Gynaecology, Liverpool Royal Infirmary*, 1, Gambier Terrace, Canning Street, Liverpool. C. 1884-6.

L.F.F. WALTER, WILLIAM, M.D., *Surgeon to St Mary's Hospital, Manchester*, 20, St. John Street, Manchester. C. 1884-91. Hon. Loc. Sec. V.P. 1888-90.

1891 WARD, J. L. W., J.P., L.R.C.P., Merthyr Tydvil, Glamorganshire.

1891 WATSON, P. H., L.R.C.P., 72, Jesmond Road, Newcastle-on-Tyne.

F.F. WEBB, VERE GEORGE, L.K.Q.C.P.I., L.M., 64, New Kent Road, S.E.

1889 WEBSTER, THOS. J., M.R.C.S.Eng., L.S.A., Brynglas, Merthyr Tydvil, S. Wales.

F.F. WELLS, ALFRED GEORGE, M.R.C.S.Eng., L.S.A., Keith House, Beaumont Terrace, West Kensington, W.

1886 WHITE, JOHN VERNON, M.D., Oscoda, Michigan, U.S.A.

1887 WHITTINGDALE, JOHN F.L., B.A., M.B., B.C.Cantab., M.R.C.S.Eng., Brecon House, Sherborne, Dorset.

1886 WHITTLE, EDWARD GEORGE, M.D.Lond., 9, Regency Square, Brighton. C. 1889-90.

1890 WILLIAMS, CYRIL JOHN, L.R.C.P., Woodhall Spa, Lincolnshire.

L. 1888 WILLIS, C. FAN COURT, M.D., M.R.C.P., 8, Marine Lines, Bombay.

1888 WILSON, F., M.D., M.R.C.S., Flaauwkraal, P.O., District Wodehouse, Cape Colony.

1887 *WILSON, EDWARD, L.R.C.P.Lond., M.R.C.S.Eng. (travelling).

L. 1886 WILSON, H. P. C., M.D., *Gynaecologist to St. Vincent's Hospital*, 146, Park Avenue, Baltimore, U.S.A. V.P. 1891-3.

L.F.F. WILSON, ROBERT T., M.D., *Assistant Surgeon, Women's Hospital of Maryland*, 152, Park Avenue, Baltimore, Maryland, U.S.A.

F.F. WILSON, WILLIAM, M.D., 80, Broad Street, Pendleton, Manchester.

1888 WITHINSHAW, CHARLES WESLEY, L.R.C.P.Edin., L.R.C.S.Edin., 61, Upper Tooting Road, S.W.

1887 WOOD, EDWARD, M.D., L.R.C.P.I., M.R.C.S.E., L.S.A., Globe Lodge, Windmill Hill, Enfield.

1890 WOOD, JAMES C., M.D., Ann Arbor, Mich., U.S.A.

L. 1891 WOODS, HUGH, M.D., B.S., M.A.O., 11, Archway Road, Highgate.

1889 WORRALL, RALPH, M.D., 20, College Street, Sydney, N.S.W.

Elected.

F.F. WORTHINGTON, GEORGE FINCH JENNINGS, M.K.Q.C.P., Thorncliffe,
 Poole Road, Bournemouth West.

L. 1885 WYLIE, WALKER GILL, M.D., 40, West Fortieth Street, New York,
 U.S.A.

F.F. WYMAN, W. SANDERSON, M.D., Red Brac, 18, Putney Hill, s.w.

1891 YOUNG, MOFFAT, L.R.C.P., 4, Upper Church Street, West Hartlepool.

1891 ZINCKE, GUSTAV, M.D., 413, Elm Street, Cincinnati, U.S.A.

1889 ZOUCHE, ISAIAH DE, M.D., Dunedin, New Zealand.

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- 1885 CRÉDÉ, E., M.D. (Leipzig)
1885 EMMETT, THOMAS ADDIS, M.D. (New York)
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1890 C. H. F. ROUTH, M.D.
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Freeport, U.S.A.

Caldwell, W. S., M.D.

Freibourg, Switzerland.

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Gateshead-on-Tyne.

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Glasgow.

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Goole.

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Guelph, Canada.

Macphatter, N. L., M.D.

Halifax.

Dolan, T. M., M.D., F.R.C.S.

Halifax, Nova Scotia.

Curry, Matthew Allison, M.D.

Halstead.

Kellett, R. G., L.K.Q.C.P.I.

Hamilton, Canada.

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Hanley.

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Harrogate.

Black, J. G., M.D.

Hartlepool.

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Helsingfors, Finland.

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Hereford.

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Huddersfield.

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Hythe.

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Jarrow-on-Tyne.

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Kars, Canada.

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Leipzig, Saxony.

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Lincoln, U.S.A.

Stone, J. S., M.D.

Liss, Hants.

Barnes, R. M. D., F.R.C.P.

Litcham.

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Liverpool.

Alexander, W., M.D.

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Davies, E. T., M.D.

Grimsdale, T. B., M.B., M.R.C.S.

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McGeagh, W., M.D.

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Wallace, J., M.D.

Llandyssul.

Evans, E. R., L.R.C.P. & S.

London.

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Barbour, Jas., M.D.

Barkley, C. H.

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Barrett, H., M.R.C.S.

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Bateman, A. G., M.B., C.M.

Bateman, F. A. N., L.R.C.P., M.R.C.S.

Bayfield, H. O., L.R.C.P., L.F.P.S.G.

Beckwith, F. C.

Bennett, C. H., M.D.

Bertolacci, J. H., L.S.A.

Biggs, M. G., M.R.C.S.

Bird, George G., M.R.C.S.

Blake, Ed., M.D.

Bourke, W. H., M.D.

Bourns, N. W., M.D.

Bowie, Alex., M.D., C.M.

Brown, C. H. Gage, M.B., C.M.

Burford, G. H., M.B., C.M.

Buxton, D. W., M.D., B.S., M.R.C.P.

Cambridge, T. A., M.R.C.S., L.S.A.

Cameron, Jas., M.D.

Campbell, W. F., L.R.C.P., L.F.P.S.G.

Carfrae, George, M.D.

Carter, A. J.

Carter, George Roe, L.R.C.P. & R.C.S.

Carvell, J. M., L.S.A.

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